



Inquisitive Mind, Generous Spirit

A Remembrance of INPAWS Stalwart Rolland Kontak

Compiled by Ruth Ann Ingraham

On January 9, 2008, INPAWS lost charter member Rolland Kontak. Rolland and his wife Mildred attended one of our earliest organizational meetings—June 1993—and were devoted members from then on.

Rolland jump-started our fledgling organization when he volunteered to be auctioneer for a Plant & Garden Goodie Auction that first fall, held in the former nature center at Holliday Park. His winning way boosted our total YTD income of \$610 by more than \$2,000, and INPAWS was up and running. Who can forget the heart-stopping bids he inspired on plants such as exotic native orchids, donated through Rolland by a Michigan grower? Then there was a recent auction when, as Tom



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Hohman remembers it, Rolland put a plant up for bid that, for some reason, he did not even have with him. He said he was looking for an “angel” to purchase this plant, which he then described. Doing his usual encouragement of bidders, the result was a very high price for the phantom plant. The winner smiled and declared, “I always wanted to be called an angel.”

Barbara Hamilton’s initial encounter with Rolland, “the man in the top hat,” was at her first INPAWS plant sale several years ago. At the time she knew little about plants, much less natives. Rolland’s depth of knowledge about the plants impressed her, and she asked him about an orchid. “He spent about fifteen minutes explaining the growth habit and requirements for the plant he had identified as a rare specimen,” she writes. “Fortunately,

he helped me decide that I did not have a good location, so I left it for someone who would have a better chance of ensuring its survival.” Barbara feels that Rolland was responsible for helping gardeners at all levels embrace the world of native plants.

Rolland was a tool-and-die engineer with the auto industry by profession, but I first connected him with coin and stamp collecting. That’s only the tip of the iceberg. As Pastor Phillip Krupski said at the funeral, Rolland was endlessly, passionately inquisitive and always woke up wondering what he would learn that day. What he learned he freely shared with others.

Consequently, many INPAWS members visited the Kontakas at their home hidden



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INPAWS Mission

To promote the appreciation, preservation, conservation, utilization and scientific study of the flora native to Indiana and to educate the public about the value, beauty, diversity, and environmental importance of indigenous vegetation.

Membership

INPAWS is a not-for-profit 501(c)(3) organization open to the public. For membership information, visit www.inpaws.org.

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Luxuriating

I remember the day I fell in love with wildflowers. It was twenty years ago, and we had just bought a small piece of land outside Cataract, Indiana. One day in late August I noticed some tall plants with large mauve-purple heads, absolutely covered with swallowtail butterflies. Back in Indianapolis I bought my first wildflower guide and looked them up. Joe-Pye weed. The next spring I saw an entire hillside of Dutchman's breeches. I was a goner.

At one point I heard there was an actual organization of people who loved wildflowers, and I had a scrap of paper with the name Carolyn Harstad. I went to a plant sale in New Augusta, bought a sweatshirt, and joined the Indiana Native Plant and Wildflower Society.

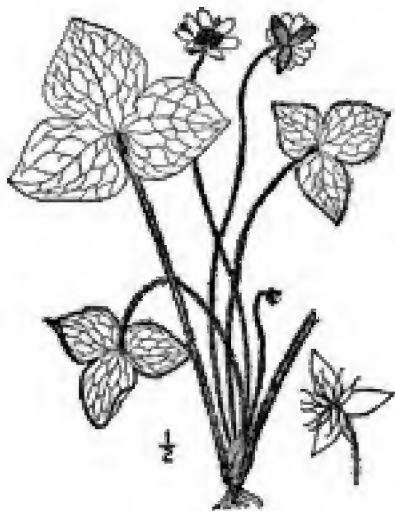
Since then, INPAWS has been a part of my life. I can't describe the pleasure that I have had since then looking for, stumbling over, identifying and simply luxuriating in Indiana's wildflowers, native trees, and shrubs. Even more fun than the plants, though, have been the people, many of whom have become dear friends. Even fellow INPAWS members I don't know too well, I appreciate immensely when we tromp together through a woods or discuss the merits of Virginia bluebells or native dogwood in our gardens.

INPAWS is even more exciting to me today. We have a new youth outreach program which will let schoolchildren who wouldn't otherwise have the opportunity, experience a day in nature. We have a team watching legislative and conservation issues in Indiana, which sadly, ranks as the country's 49th greenest state. We have a plant sale May 10 which is shaping up to be the best ever, and have Doug Tallamy as this year's conference keynote.

Whatever your interests and talents, I encourage you to get involved with INPAWS. A committee chair would love to hear from you.

It's loads of fun spending time with people who love plants!

—Nancy Hill



Sharplobe hepatica (*Hepatica nobilis* Schreb. var. *acuta* (Pursh) Steyererm. Britton, N.L., and A. Brown. 1913. An illustrated flora of the northern United States, Canada and the British Possessions. Vol. 2: 101. Courtesy of Kentucky Native Plant Society.

INPAWS PARTNERS

INCA Conservation Priorities for 2008

INPAWS participates in the Indiana Conservation Alliance (INCA), a state-wide network of nonprofit organizations providing a unified voice for the protection, stewardship, and sustainable use of Indiana's natural resources. INCA was instrumental last year in achieving appropriations of **\$4 million to the Indiana Heritage Trust**, the state's only dedicated land acquisition program for conservation, and **\$2 million additional funding for Clean Water Indiana (CWI)**, which lends Indiana farmers and property owners the technical expertise to complete projects that conserve soil and water.

This year, INCA organizations worked on the following priorities:

► **Great Lakes Water Resources Compact (SB 45)** Water shortages in the parched south and west have raised questions on the feasibility of fresh water pipelines and massive shipments of water from the Great Lakes. This bill **prevents diversions of water from the Great Lakes Basin**. *Signed into law.*

► **Renewable Energy Standard (RES) (HB 1102)** A new state standard would **require 10% percent of Indiana's electricity to come from renewable sources by 2018**. Promotes in-state development of wind, energy crops, bio-gas, solar, and other strictly renewable energy sources. *Died in committee.*

► **Apprentice Hunting License** Seeking to reverse the declining number of hunters while increasing Indiana's share of federal matching dollars, this bill **enables youth to hunt under the mentorship of a licensed adult**. *Signed into law.*

► **Sustained Funding for the Division of Forestry (DOF)** SB 14 and HB 1001 would eliminate the funding of DOF from property taxes, a funding method established in 1925 with the philosophy to be above politics and provide a more stable source than the general fund. **INCA supports finding a new dedicated funding source for the DOF**. *SB 14 passed the Senate but died in the House; HB 1001 covered the loss of DOF funding for next year.*

Rolland Kontak, continued from page 1

in the woods near Beech Grove. We made a U-turn off multiple lanes of pavement onto a narrow lane that led into a dense forest and Rolland and Mildred's 20-acre urban oasis. It was a mystical experience to enter the deep shade, a mere stone's throw away from concrete and speeding traffic. Warmly greeted, we followed Rolland on meandering paths that crossed a stream and ended at the far edge of his property along another busy urban street, where he maintained a mountain of composting material, donated initially by IPALCO. Back at the Kontaks' home, Carolyn Bryson remembers the iron sculptures he designed and created. And there were his experimental plots, one to determine how best to encourage dog-toothed violets to bloom. Rolland always sent us home with something—seeds he'd collected or plants he'd propagated. Near my back door is a thriving patch of miniature hostas from his garden.

Barbara attended a program in Cool Creek Park where Rolland was the presenter and had with him a variety of odds-and-ends for which she could see no practical use. She writes, "Throughout the program, he enthusiastically enlightened all of us in how to make good use of each item he had scavenged from his neighbor's trash as well as the left-behind wire frames for political yard posters. Uses ranged from making paper pots for planting seeds

to constructing plant support forms from the wires." Remember his plant identification markers? Strips of metal blinds cut into 6-inch lengths.

In recent years Parkinson's disease took its toll but didn't stop him from doing what he loved, with Mildred always by his side. Colletta Kosiba cherishes the day when Rolland, despite needing a cane for stability, strolled with other INPAWS members around her 13-acre landscaped property near Brownsburg.

A couple of years ago, Hilary Cox walked with Rolland and Mildred on a field trip that Kevin Tungesvick organized at Yuhus Woods in east-central Indiana. Trilliums and other woodland plants were in their springtime glory. While Hilary and Rolland talked about their shared passion for plants and photography, he never once complained about his condi-

▲ "There are no friends at an auction" was Rolland's signature phrase to bring the bidding higher. Photo by the author.

◀ *Front page:* Hummer with bottle gentian was the caption for this Rolland Kontak photo.

▼ Rolland shared with friends his passion for wildlife photography by emailing a regular Pix of the Week.



tion, just took things very slowly and in stride, she relates. And in Carolyn's words, "His determination to stay involved in his favorite activities in spite of his physical challenges was an example that I shall not soon forget."

Plants and photography were intimately connected for Rolland. Hilary and Carolyn both saved all of his Pix of the Week, starting in September 2000 and ending August 2003. Native flora was the usual subject but occasionally he'd email a close-up of a pileated woodpecker or other creature in nature. Anyone interested could ask to be on his email list. His printed photos were used to "energize potential bidders" at both the IMA Horticultural Society and INPAWS auctions, recalls Carolyn. And when Juanita Graham, another stellar INPAWS member, died in December 2000, he sent out a stunning picture, in tribute, of a snow trillium that grew in her wooded ravine. (Hilary sent me this photo along with her memories.)

George Wilson liked to walk with Rolland on field trips, as they both loved photographing flowers. George appreciated Rolland's wonderful eye for what would make a good picture.

Rolland started Betsy Wilson on her avocation of breeding native plants. "I bought some of his seeds at the early meetings



2008 Plant Sale and Auction Preview

It's that time again! Time to start thinking about the annual INPAWS Plant Sale and Auction. After two successful years at the Indiana School for the Blind, the sale will move to a new location. **This year's event will be held May 10 at Trinity/St. Richard's Church and School, 3243 N. Meridian St., Indianapolis.** The location will provide more room for the sale, a stage for the auction, and better parking.

The plant sale will begin at 10:00 a.m., the auction at 11:15 a.m. All sale plants still remaining by about 12:15 p.m. will be sold as the last items of the auction.

A selection of books on native plant gardening, wildflowers, and other nature-related topics will again be available for sale, but because of the larger space they will no longer need to be sold in a separate room. Books will now be available throughout the plant sale and auction.

Volunteers—The sale could not be a success without all the hard work of the volunteers. Whether it's digging plants to donate or helping the day of the sale, their help is critical. Many of them volunteer year after year, enjoying the camaraderie of other native plant enthusiasts and sometimes the challenge of identifying an unknown plant that someone has just dropped off.

Volunteers are needed to help with setup on Friday night, and with the sale itself on Saturday. You don't

need to know a lot about native plants (although it does help). We can use your brain or your brawn, or both. Your skills can be used pricing plants for the sale, helping customers carry their purchases to their cars, and many other related tasks. Anyone interested in helping should contact Tom Hohman at hohmantr@aol.com.

Donations—All the plants in the sale are either donated by members and businesses, or have been obtained in an INPAWS plant rescue. This year we are making a special effort to encourage members to grow plants from seed. This will enable us to provide a more predictable inventory of plants, especially some of the late-blooming prairie plants that we always seem to have too few of.

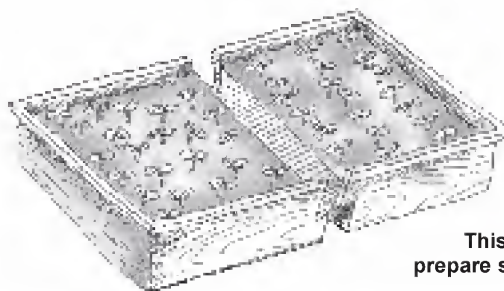
Plant donations should be brought to St. Richard's school gymnasium on Friday night from 5:00 to 8:00 p.m., or Saturday morning before 9:00 a.m. Please pot any plants that you are going to donate several weeks prior to the sale. Doing so will enable them to better withstand the stress of transportation and the sale itself. Labeling of the plants prior to donation is a big help. While it's fun to identify that uncommon plant, doing so while an eager

crowd is milling about at the front door can be a little stressful.

Auction—The favorite part of the sale for many is the auction, even if they don't buy anything. It's a great opportunity to learn more about the plants for sale, watch the competitive bidding, and possibly pick up an unexpected bargain. The combination of auctioneer Mike Stelts' banter with the knowledgeable comments of experts like Kevin Tunesvick, Hillary Cox, and Sue Nord Peiffer make for a really entertaining event, one that's over all too quickly.

If you have never been to the plant sale before, make it a point to come and join the fun. Although held in Indianapolis, it is truly a statewide event, one worth coming to Indy to see. Once you do come, you'll likely make it an annual event.

Tom Hohman, Chairperson, 2008 Plant Sale and Auction



This year we encourage members to prepare seedlings of prairie plants.

and planted them per his instructions. Amazingly they grew and have thrived. My small prairie is the Rolland Kontak Prairie. It measures only about 6 by 20 feet, but the seeds Rolland carefully collected and sold at the annual meeting have made it a goldfinch and sparrow magnet and a treat to the eyes in July."

Betsy also recalls how willing to help and enthusiastic Rolland was about the INPAWS Central Chapter. "He did our first

meeting on saving seeds. Besides giving the talk, he brought, unasked, items to auction so that we would have a little cash to send out mailings and pay for meeting rooms and speakers."

I found this quotation printed on the back of the folder distributed the day of Rolland's funeral in the historic sanctuary of the St. John Lutheran Church.

...If life went on the same without the presence of the one who has died, we

could only conclude that the life we here celebrate made no contribution, filled no space, meant nothing. The fact that this individual left behind a place that cannot be filled is a high tribute to this individual. Life can be the same after a trinket has been lost, but never after the loss of a treasure.

—Paul Irion, Emeritus Professor of Pastoral Theology at Lancaster Theology Seminary, UCC.

Money Matters

INPAWS' annual budget aims to cover all expenses with equal amounts of revenue. For 2007, the operating budget was set at \$20,245. With the books now closed on 2007, we are pleased to report that we achieved our financial goals (see details at www.inpaws.org).

INPAWS' primary sources of revenue each year are member dues, the spring plant sale, additional member donations, and book sales. These revenues support INPAWS programs and field trips, educational outreach through exhibits and brochures, our quarterly newsletter, and the annual conference. In addition, the four regional INPAWS chapters each receive a portion of member dues to nurture local activities.

INPAWS' costs of "doing business" are dominated by printing, postage, and paper for the members' directory, postcard mailings for wildflower hikes, and renewal notices; but they also include lesser costs such as liability insurance, tax preparation, and website operations. All other services are provided by volunteers at no cost, including newsletter creation, member activities, the plant sale, and administration, collectively representing hundreds of hours of volunteer labor. We are extremely grateful to those who give so generously of their time.



The small grants program has historically been funded through interest payments from INPAWS' certificate of deposit (CD) investments of about \$50,000. INPAWS was delighted to award a total of \$2,000 to five recipients in 2007, as well as an additional \$5,000 grant to WFYI for its three-part televised presentation, *The Natural Heritage of Indiana*.

Annual education and publicity costs included booth displays at Orchard in Bloom, the Earth Day Festival, and Conservation Day at the Statehouse. Attendance at these events increases every year and helps connect INPAWS to other local conservation and invasive plant efforts.

INPAWS' budget recognizes the all-day annual conference as a significant undertaking whose expenses for facility, food, and speaker typically exceed registration revenue. Indeed, despite an unprecedented level of sponsorship support and significant silent auction proceeds, the 2007 annual conference, as budgeted, fell slightly short of breakeven status.

We strive each year to maximize the impact of INPAWS' activities to meet a wide variety of member interests and native plant needs while also acting in a fiscally responsible manner. Your INPAWS' officers and council welcome comments and suggestions for the coming year.

We thank all those who made extra donations in 2007 to support INPAWS programs and activities.

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AmeriPlex Business Park Breaks New Ground

Last November, the AmeriPlex Business Park, just south of Indianapolis International Airport, was certified by the Indiana Wildlife Federation as the state's first wildlife-friendly development. The 1,500-acre complex, owned by Holladay Properties, has about five acres of wetlands, including nine ponds, as well as acres of prairie and woodland and specially designed habitats for native species.

Jerry Wheeler, director of education for IWF, noted the importance of such habitats. "They help migrating animals like birds, especially when they're going through urban areas," he says. "They need a place to rest." Gary "Dox" Doxtater, IWF's director of development and the retired head of the Indiana Department of Natural Resources' Fish and Wildlife Division, said he hopes AmeriPlex sets the tone for future business parks. "This project will lead the field in restoring and protecting wildlife habitat, particularly in urban areas," he said.

AmeriPlex is an example of the changing mindset in corporate America. It was Holladay Properties that wanted to make the complex environmentally friendly, and they were the ones who first approached IWF to see how they could do it. Doug Hunt, Holladay's senior vice president of development, was one of the first to begin working on it. Someone within the company who was connected with IWF suggested Holladay seek its help. Mark and Heather Brehob, landscape supervisors for Holladay, in turn became certified habitat stewards through IWF. Catherine Brown, a volunteer and certified habitat steward for IWF, said, "They wanted to be green. They approached us to see what they needed to do."

There's a lot of upfront work to achieve wildlife-friendly certification, but those connected with AmeriPlex say the results are worth it. Besides preserving nature, such work also boosts property values and workplace morale. Businesses within the park already are taking advantage of the walking trails and scenery for recreational purposes and even to conduct meetings. To locate in the park, businesses must meet specific IWF guidelines when designing buildings. Holladay has its own additional criteria.

Mark Brehob says there was some skepticism back when Holladay first started work on the project. "But once the habitats started taking off, we were getting all kinds of people telling us how neat it was," he said. Hunt said he expects this to be only the beginning. "This business park is no token effort," he said. "We're hoping to work with other businesses here to get them on board to contribute. Hopefully, we'll have many more projects like this." Doxtater added, "This project is setting the bar for what private enterprise can do."

Welcome to Our New INPAWS Members

CENTRAL

Nina C. Andrew
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Rosanne Bonjouklian
Karen Burroughs
Cira Coates
Brian C. Cooper
Glenna Heath
Jill, Ryan, & James Larrowe
Ian D. Macdonald
Mary Ann McLean
Ross Nelson
Kathleen & Ron Ross

EAST

Tami Coleman & Peter Mentzel
Deanna Vazquez

SOUTH

Brian W. Arnold
Keith F. Barnhardt
Phyllis Boyd
Marc Evans
Jerry D. Horn
Susan Knapczyk

WEST

Steven Holladay
Naida Lehmann
Denise Marks

*To join INPAWS or renew
your membership, visit
www.inpaws.org.*

IWF also helps homeowners and school corporations establish such habitats. "I'm anxious to get this started with residential developers," Doxtater says. "We can do there what's been done here." Hunt also is realistic about the park but believes it's a progressive step forward in the relationship between progress and preservation. "We aren't in wild nature here, but we've tried to make a place where you can experience it," he said.

Adapted with permission from an article by Wade Coggeshall published November 1, 2007, in Hendricks County Flyer. Information on line at www.holladayproperties.com and www.indianawildlife.org.

Serendipity

It was all the fault of that announcement in the INPAWS Journal Field Notes. Well, no, I can't *quite* claim that.

After all, we had been tramping all over Indiana and Kentucky looking at plants out of sheer curiosity for long enough already, as those of you who read your journal cover-to-cover are likely to remember! Perhaps INPAWS Journal was just our "enabler."

If you're a regular reader, then you probably saw the announcement: The Chicago Botanic Garden was looking for botanists to collect seeds from Midwestern prairie plants, the seeds to be stored with the Seeds of Success (www.nps.gov/plants/sos/index.htm) and Millennium Seedbank (www.kew.org/msbp/index.htm) projects. Metaphorically, my ears pricked up. Although neither Dee Ann Peine nor I consider ourselves botanists, we are definitely knowledgeable plant enthusiasts, and here we were with an unusual seedbank in the form of the barrens in Kentucky just when the world's botanists happened to be looking for seeds!

Having verified Dee Ann's interest in joining such an effort, I emailed our updated list of species to the CBG. We received an answer almost immediately...along with our list highlighted with 23 of the species they were interested in collecting—and a contract to sign! As it turns out, our barrens is a disjunct population and they were keen to get some of that diversity into the project.

After a flurry of emails and snail-mail, we were signed up as contract botanists for the year...and thus we essayed forth into a "brave new world."

Scheduling our tasks was an essential part of this new world. To collect seed, you need to know the optimal time of seed production for each individual species. Innocently, we thought this would be an easy matter.

The first species on our list likely to produce seed was birdfoot violet (*Viola*



Cleaning *Echinacea simulata* seeds - ouch!

pedata). Until last year, I had seen them growing only in relatively small patches, but on our first trip to Kentucky last April we had been taken aback to see them in carpets—in the grass, in the fields, in the woods, even growing out of sheer rock! So by May, we thought, it would be easy to collect the seed. We checked with Kevin Tunesvick as to their likely time of maturity and looked online to double check.

Serendipitously, they were due to be ready around the same time as the two botanists overseeing the project were coming down from Chicago. We had our couple of days all planned: camping out at the Peine farm in Morgan County, Indiana, one day; harvesting seeds at the Powell farm in Kentucky the next.

Then phenology introduced itself into our new world—and apparently is new to Microsoft Word too. Wikipedia defines it as "study of the times of recurring natural phenomena." I had become familiar with the word both cerebrally and conceptually through the website by which I track the spring and fall migrations of those creatures that make such legendary annual treks (www.journenorth.org). Now I became familiar with phenology somatically as well—from the gut.

As it turned out, even our surest "guesses" proved wildly wide of the mark with every species, including the birdfoot violet. Look as we might, all four of us could find nothing to harvest! Disappointingly, the seeds were all already dispersed. I should explain that we were supposed to collect a minimum of 7,000 seeds (optimal is 10,000) from at least 50 individual plants to a maximum of 20% of the population. Our first collection was a bust.

Another lesson I learned only slowly, and still incompletely, is not just to observe my surroundings but to *make notes* about them—let them become a part of me,



Seedbank coordinators Emily Yates and Betsy Allen, from Chicago Botanic Garden, at Kentucky Barrens, May 2007. Photos by the author.

become one with them, *and write it down*. Notation has been the hardest part for me, which seems strange for someone who considers herself a writer! When I get into the moment, in the field, with so many exciting things to do and see...notation is the first thing to go by the board.

How many of you have been to a herbarium to look at collected plant samples? And then wished there had been more written information about them? It's all very well to see the actual plant, its roots, leaves, flowers, seedheads; but do they tell us where it was found and what kind of weather it was that day or that season or that year? Had the weather affected how it looked at the moment of collection? Was it typical or atypical of its kind? Did it flower and seed on time for its genus? Trained as a science librarian, I should see as obvious the necessity to record as much data as possible for future reference...yet life keeps getting in the way.

There's that orchid we wanted to check out again...oops, it's been plowed up. Well it's getting very hot, so why don't we head into the woods now...oh darn, we're lost! Back in the barrens and actually looking for the plant we need to collect seed from today...these pesky ticks...got to get over to Wayne and Mary's house and do a tick check...now, what were we doing? Oh yes, better get it done, don't forget those notes...scribble, scribble...that's enough, we'll finish when we get home. (Famous last words!)

Atop my computer lies a sheet of paper describing an overcast, stormy day in Kentucky on which I show Dee Ann the orchids I found the previous Saturday; we get lost in the woods, where we find partially parasitic false foxgloves (*Aureolaria*, probably *laevigata* or *virginiana*), dense blazing star (*Liatris spicata*), and twayblades (*Liparis* spp...we didn't see them flower last year); and we get stuck in the mud so that Dee Ann has to push us out.

But to know what month that was, the actual date and what seeds we were hoping to collect, I have to go to (1) my field notebook and (2) my calendar. These are variously dispersed (1) in my car, in preparation for my much anticipated trip this weekend into the Superstition Mountains looking for wildflowers with Tucsonan author Scott Calhoun and my sister-in-law Judy Cox, or (2) filed away with the rest of my tax documents to be handed over to my *other* sister-in-law who is my tax accountant.

PHENOLOGY PRIMER

National Phenology Network Observes Native Species

Phenology, which is derived from the Greek word *phaino* meaning to show or to appear, is the study of periodic plant and animal life cycle events that are influenced by environmental changes, especially seasonal variations in temperature and precipitation driven by weather and climate. Sprouting and flowering of plants in the spring, leaf color changes of plants in the fall, bird migration, insect hatches, and animal hibernation are all examples of phenological events.

Plants are special, highly sensitive weather instruments that integrate the combined effect of weather factors such as temperature, rainfall, humidity, wind, and sunshine in their growth response. They can be observed year after year and dates recorded when certain growth stages occur, such as opening of leaf buds or appearance of first flowers.

Recently, phenology has been identified as a crucial contributor to global change research. Understanding the interaction between the atmosphere (weather and climate) and the biosphere (living organisms) is a necessary part of efforts to improve models of Earth's physical systems and monitor the impact of global climate change.

Try as I may, I cannot make myself slow down and methodically write *in one place* all the information I am wishing I had in front of me right now. Had I stuck with just filling in the fields on the form the CBG issued us, perhaps I would have more than the bits and pieces I'm looking at now. Clearly, the third subject needing further study on my part is organization.

The lessons we *have* learned from our season of seed collecting are almost beyond description: the unexpected depth of intimacy we have shared with the plants we are harvesting; the impact of drought, not only on seed production but on every part of a plant's life cycle; our dependence on weather conditions, so different last year during an exceptional drought from

The USA-National Phenology Network Native Species Observation Program is being initiated to provide observers with a selection of native plants in their region of the country (www.uwm.edu/Dept/Geography/npn/map.html) that are representative of the local/regional flora, but also abundant enough to make them easy to identify and observe.

Observations of representative native plants over large geographical regions are a vital source of information for comparison with satellite measurements and indicator plant phenology. Just as continuous and widely distributed weather observations have led to increased knowledge of atmospheric phenomena, so too will these phenological observations contribute to an active understanding of biospheric functions.

USA-NPN gives guidance to help professional and citizen scientists select and observe appropriate species at their location, and then encourages them to register and submit the data they collect each year over the Internet.

This information is adapted from the USA-NPN Web site. To participate in the network as a native plant species observer, register at www.uwm.edu/Dept/Geography/npn/index.html.



the previous year with its overabundant rain.

Was it pure serendipity that led me to this, the most satisfying and maybe the most important job of my life? Whatever the answer, I've just mailed the next contract back to the CBG. We're signed up to continue the journey for another year, enabling Dee Ann and me to pursue our addiction, and, using our new-found knowledge and experience, maybe to top our current total of six collections—60,000 seeds, collected and cleaned!

Of Sheets and Vouchers

If you've wondered, as I have, what goes on in a herbarium, here are some insights from the keeper of Butler University's Friesner Herbarium, INPAWS' own Becky Dolan. —Ed.

Botanists have been making pressed, dried specimens from living plant material for hundreds of years. They keep them in specially designed cases in herbaria (singular: herbarium) under carefully controlled conditions to prevent damage from moisture, insects, rodents, and other potential hazards.

Combining aspects of a museum and a reference library, our Indiana herbaria are an irreplaceable treasure that botanists use for many different research activities. The collections of pressed and dried plants document the flora growing outside of cultivation; they facilitate the education of future botanists and the scientific study of plant distribution and significance.

Herbaria also house significant sheets referred to as "types." These sheets contain the specimens that authors of new plant names have assigned to be the reference for the application of that name, i.e., the specimen with which that name is permanently associated.

Herbaria are of great value to professional botanists, providing a network enabling them to share information by exchanging and loaning sheets. The specimens, along with the information carefully documented on their labels, comprise a reference library on historical distribution, habitats, and the timing of flowering and fruit production. "Voucher" specimens stored in herbaria serve to verify plant identifications from formal surveys and inventories taken in the field.

A proper herbarium label contains at least the following information:

1. A heading indicating the state or area covered by the collection; very brief, e.g., Flora of Indiana or Flora of Mounds State Park.
2. Scientific name (genus, specific epithet, author, variety)
3. Locality where the specimen was collected, the more specific the better
4. Habitat, e.g., woods, old field, beech-maple forest, north-facing bluff along Sugar Creek
5. Date the material was collected
6. Name of collector
7. Collector's collection number

The label is brief and concise, but usually botanists write additional information in a field notebook (e.g., a list of everything that was collected at the same site on the same day). Thus more information may be available than what ends up on the label.

Indiana is home to dozens of herbaria. Highlights of the following collections suggest the range of research that herbaria support. Many have searchable databases providing ready access to specimen information.

Ball State University Herbarium, Muncie

Over 13,000 specimens collected mostly by faculty and graduate students working in the Midwest. Currently documenting the flora of East-Central Indiana, with special emphasis on floristic and ecological studies of remnant fen communities. Houses the voucher specimens for Dr. Tom Merten's taxonomic studies of the genus *Polygonum*.

Friesner Herbarium, Butler University, Indianapolis

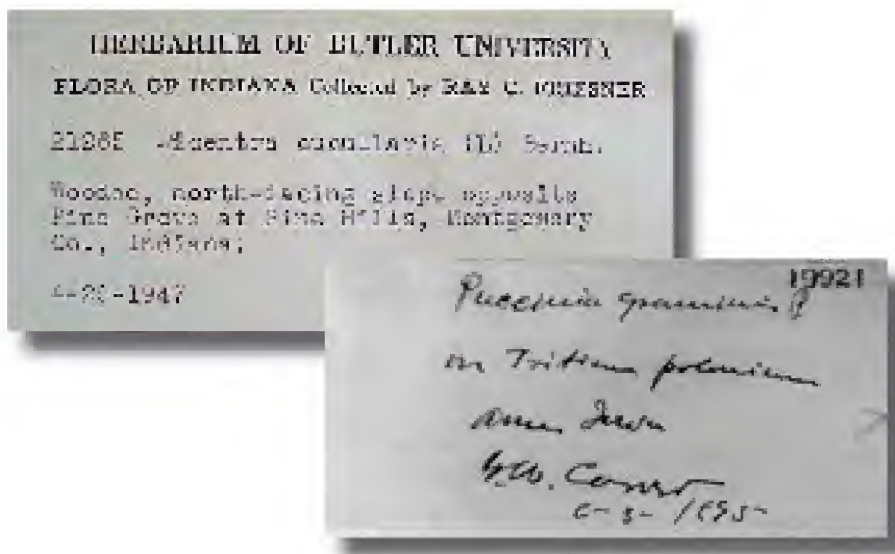
Over 100,000 specimens and a database of specimen label information for ca. 40,000 sheets collected in Indiana. Most collected 1920-1950 by Ray Friesner, Stanley Cain, John Potzger, and other Butler faculty and students whose work focused on floristics. Friesner was a prolific exchanger, so collection includes gems from around the world (collectors are listed in Brittonia 43:54-56), along with many duplicates of Charles Deam's collections. Also houses the Charophyte herbarium of Fay Daily.

Indiana University Southeast Herbarium, New Albany

Original purpose was to facilitate world-wide exchanges of tropical legumes and provide a resource reference set of vascular plants from surrounding counties for community and research. Estimated 7,000 mounted sheets collected by former IUS students and currently by volunteer collectors such as William E. Thomas. A pictorial database to identify *Dioclea* Kunth sensu lato is planned.

Deam Herbarium, Indiana University, Bloomington

Over 140,000 specimens, the core comprising ca. 60,000 early 20th century sheets collected by Charles Deam to document the county-based distribution of the vascular flora of



Indiana. Deam's work was compiled in his 1940 book *The Flora of Indiana*. Also the repository for research material collected by faculty and graduate students at Indiana University, such as the *Helianthus* collection assembled by Charley Heiser.

Greene-Nieuwland Herbarium, University of Notre Dame, South Bend

The Edward Lee Greene and Julius A. Nieuwland collections together contain more than 266,000 specimens of worldwide distribution. The North American flora is well represented by material collected by Greene and contemporaries mainly from the West (1870s-1915) and by Nieuwland (1906-1936) from the Midwest and East. An estimated 18,000 specimens are from Indiana. Current activities are increasing holdings from Illinois, Indiana, Michigan, and Wisconsin of aquatic, wetland, and forest plants, *Quercus*, and invasive species.

Purdue University, Arthur Herbarium and Kriebel Herbarium, West Lafayette

Arthur Herbarium houses one of the world's largest, most important collections of plant rust fungi, about 100,000 specimens collected worldwide. Because rust is a parasite on a vascular plant, every specimen in the collection is also a specimen of the host plant, adding to its scientific value. The oldest is a barberry leaf (*Berberis*) infected with *Puccinia meyeri-alberti*, collected in Tierra del Fuego, Argentina, in January 1769 during Captain James Cook's first discovery voyage around the world. Also has ca. 100 specimens of rust collected by George Washington Carver.

The Kriebel Herbarium houses 60,000 vascular plant specimens, about 1200 bryophyte specimens, and many algae and non-rust fungi specimens. About 11,000 specimens were collected by Kriebel, mostly from Indiana and especially from Lawrence County. Some of the earliest specimens were collected by Asa Clapp in the 1830's in the New Albany, Indiana, area.

◀ Labels courtesy of Friesner Herbarium and Kriebel Herbarium. Note the 1895 date on the hand-written label for *Puccinia graminis*, the common wheat rust, which George Washington Carver collected while a student at Iowa State University, before he went to Tuskegee, Alabama, and became better known.

▶ Dotted blazing star (*Liatris punctata* Hook. var. *punctata*). USDA-NRCS PLANTS Database / Britton, N.L., and A. Brown. 1913. An illustrated flora of the northern United States, Canada and the British Possessions. Vol. 3: 366.

Custer's Last Plants

Dr. Greg Shaner
and Nick Harby,
Purdue University

Last week, a botanist named Roger Troutman visited our Kriebel Herbarium to examine our specimens of *Liatris*. The label on one sheet identified the species as *Liatris punctata* Hook., collected in 1874 in the Black Hills, W.T. (Western Territory). The collector was simply identified as Custer.

Some checking revealed that General George Armstrong Custer led a well-armed force of 1000 troopers into the Black Hills of what is now western South Dakota and eastern Wyoming in 1874. Aris Donaldson was a Minnesota newspaperman who served as botanist and would collect plants during the trip. On July 25th, the expeditionary force entered what Custer named Floral Valley.

In a dispatch Custer wrote:

Its equal I have never seen. Every step of our march that day was amid flowers of the most exquisite colors and perfume. So luxuriant in growth were they that the men plucked them without dismounting from the saddle...It was a strange sight to glance back at the advancing columns of cavalry, and behold the men with beautiful bouquets in their hands, while the head-gear of the horses was decorated with wreaths of flowers fit to crown a queen of May.

Donaldson sent herbaceous specimens to John Coulter, then a professor at Hanover College in southern Indiana, for identification. When Coulter moved to Wabash College in Crawfordsville, he took his plant collections with him, including these Black Hills specimens. In 1994, Wabash College divested itself of its herbarium. It was transferred to the herbarium of the New York Botanical

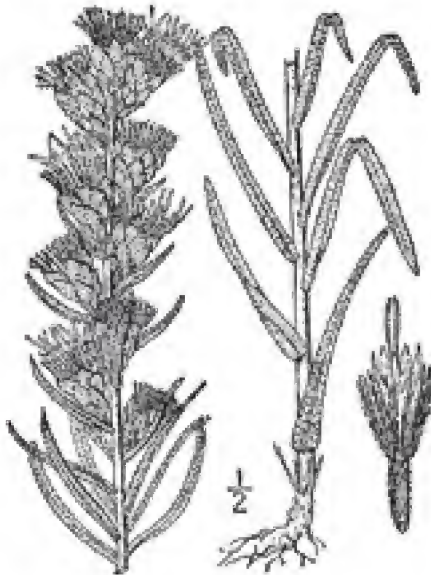
Garden. An article about the Wabash Herbarium was published in *Brittonia* in 1994 (43:211-224). Only 40 of the 74 specimens collected by the Custer expedition were included in the material from Wabash. The New York herbarium queried several other herbaria in the Midwest about the other specimens, but not Purdue.

We have entered about one-fifth of our higher plant collection into an electronic database,

and quickly found that we had seven more specimens from the Black Hills 1874 expedition. Using a complete list of species collected by Donaldson that Coulter published in the first issue of the *Botanical Gazette* (November, 1875), we found 3 more specimens. The labels on all of these specimens state that they are from the herbarium of Charles Barnes. Barnes was born in Madison, Indiana. He and John Coulter met as students at Hanover College and became good friends. Barnes was a professor of botany at Purdue from 1882 through 1887. Perhaps Coulter sent part of the Black Hills collection to Barnes while he was at Purdue.

All but one of our specimens designates Donaldson as the collector. This leads us to wonder if Custer, identified as the collector of our specimen of *Liatris punctata*, plucked these plants himself, maybe without dismounting from his saddle.

Reprinted with permission from Root of the Matter (newsletter of Purdue University Dept. of Botany and Plant Pathology), March 9, 2007.



Hey Kids! Come Out & Play!

Reni Winter, Winterhaven Wildflowers & Native Plant Preserve

Shhhhh. Listen.

Go outside and be very still. If you're really attentive, and the city noises around you are hushed enough—or the voice reaching into your soul is loud enough—you can hear Mother Nature calling, "Hey kids! Come out and play!"

Our young people have more distractions, more diversions, more devices to keep them entertained than ever before. Kids even of my generation—I'm 53—are so distracted by portable digital gadgets that Richard Louv has coined a new term to describe the resulting psychological ailment—Nature Deficit Disorder, brought about by a disconnect between children and the natural world. (See an online presentation by Richard Louv, author of *Last Child in the Woods: Saving our Children from Nature Deficit Disorder*, at www.mediasite.com/presentation.aspx?p=11952.)

It's nice that someone has put a name to the condition I grew up with. I always loved the country but was born in Manhattan, New York, and raised inside the Washington D.C. Beltway. Ambulance sirens were the only calls of the wild I ever heard, except on occasional drives into the Maryland countryside and camping trips with the Girl Scouts.

Long walks by myself in the neighborhood in my early teen years, and one yard sign that stuck with me—*The gift of the sun for pardon, the song of the birds for mirth. One's nearer God's heart in a garden than anywhere else on earth*—gave rise to my lifelong dream to have a place in the country where I would surround myself with all things good and natural. Life took me in a different direction, a journalism career, but about four years ago a surprise inheritance enabled me to buy my piece of heaven on earth—13.27 acres of intensely fertile alfalfa farm in rural Tippecanoe County.



Teacher Mickey Penrod and her students are building a wildlife habitat at McCutcheon High School. The class visited Winterhaven to see the habitat plants growing in their native environment.



Cindy Pratt dug wildflowers and native grasses to purchase for a small wildlife area at her Lafayette, Ind. home. Daughter Hannah, who is home-schooled, enjoyed watching butterflies, helping to dig, and learning about native plants.

I picked the property because of the spring and wetlands, and the swales that allow water to flow south through the land. I had fallen in love with wetland plants while volunteering at the Crosby Arboretum, a preserve and education center that is restoring the longleaf pine savannah near Picayune, Mississippi. (Take a peek at what inspired me by visiting www.crosbyarboretum.msstate.edu.) My new property on County Road 900 West near the Fountain County line (southwest of Lafayette, Indiana) offered the potential for a variety of plant communities—not just a wetland, but prairie and other communities in between.

As soon as I bought the old farmland, I embarked on reclaiming it as a natural area, borrowing a concept I had learned at Crosby. I secured an Indiana Department of Natural Resources wildlife habitat grant to return a portion of the land to tall grass prairie. DNR wildlife biologist Dean Zimmerman, who lives just up the road from me, provided guidance as I wrote the cost-share pheasant priority grant. He is quick to advise on needed changes to what I'm doing, as he passes my property every day on his way to work!

The wildflower and grass seed mix took off that first year, despite a drought, and most of the small trees and shrubs I planted survived. A year after planting, the burst of color in the spring and summer in the habitat area was amazing. My ability to identify flowers and grasses native to Indiana was increasing exponentially, and I was discovering an equal number of stunning native flowers growing here on their own.

A happy byproduct of spending my days outside with the prolific stands of coneflowers and Indian grass, little and big bluestem, black-eyed Susans and countless other varieties of native plants, was a growing inner peace and joy—a sense of being loved and nurtured

by the land—that this city girl had longed for, imagined many times, but never really felt. Mother Nature was taking care of me, and would continue to do so if I continued to take care of her.

Working part-time at Bennett's Greenhouses, I kept hearing customers ask for native plants and wildflowers. I read articles about the growing consumer interest in native plants for the home landscape because of their resilience and ease of maintenance. It dawned on me that by starting a native plant nursery on my land I could generate income to support the development of the preserve.

The idea for Winterhaven Wildflowers & Native Plant Preserve was born. It would not only host wildlife and native plants but serve as a haven to people as well, people like me seeking a retreat from the fast pace of life, who might need to heal from the ravages of experience, who might never have heard Mother Nature's gentle but firm call to come out and play. Inspired, I joined the West Central Chapter of INPAWS and became certified as a native plant rescuer. I began monitoring the migrations and life cycles of animals and insects through the Journey North online program (www.journeynorth.org). I registered Winterhaven as a National Wildlife Federation certified wildlife habitat (www.nwf.org) and as a certified Monarch Waystation in the University of Kansas Monarch Watch program (www.monarchwatch.org).

Last year, I started inviting school groups and friends with children, photographers, nature writers, neighbors, and the general public to Winterhaven, not only to enjoy the preserve but to participate in its operation! Children as young as toddlers are helping to reclaim this fertile farmland by sowing and harvesting seeds. In a safe, supervised outdoor environment, these youngest visitors are encountering and exploring the simple natural splendors of central Indiana, letting their imaginations run wild against the backdrop of butterflies and songbirds, wildflowers, and fireflies.

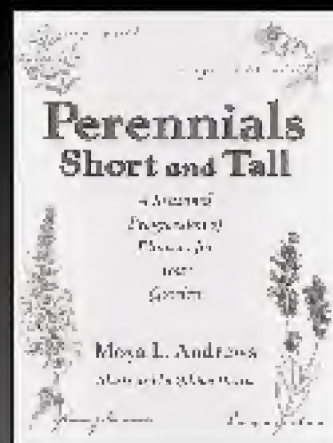
Older children help with transplanting seedlings, looking for and documenting plant communities, pulling invasives, and monitoring Monarch larvae and butterfly populations. They seem to enjoy the hunt for wildflower volunteers that often sprout along the mown paths and need "rescuing." Once a plant is confirmed as a PINS—Plant in Need of Saving—children and older visitors receive a hands-on guided experience digging up the misplaced plants and transplanting them to a safe place off the path where they can flourish. One high school teacher has even used Winterhaven's wildlife habitat to teach her students social responsibility and practical applications of English and math.

For families with children, we plan "dig your own" plant sales and outdoor workshops such as the annual Monarch Migration Celebration, a cross-cultural event that teaches the interconnectedness of conservation efforts needed in three countries (Mexico, Canada, and the U.S.) to preserve the habitat of the miraculous mariposa monarca.

This spring, all are invited to help build a 10 by 40 foot "high tunnel" to extend the growing season by raising the temperature and humidity level for two 5 x 40 foot rows of wildflowers and grasses. This plastic covered greenhouse will give native plant customers an early start with plants that are in the ground but sheltered from extremes.

Children of all ages are welcome and needed at Winterhaven Wildflowers & Native Plant Preserve to further the cause of land stewardship and have a blast while doing it!

Reni Winter is president-elect of INPAWS' West Central Chapter and co-chair of the 2008 INPAWS Annual Conference. She owns and operates Winterhaven Wildflowers & Native Plant Preserve as a retail nursery and agri-tourism venture. All proceeds go back into the development of Winterhaven programs (www.winterhavenfarm.us). Contact Reni at 765-714-4288 or reni@winterhavenfarm.us.



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Coming Up

Saturday, April 12

INPAWS Hike in Pine Hills Nature Preserve, Montgomery County. Spring ephemeral wildflowers and geologic formations. Led by Roger Hedge.

Thursday–Sunday, April 17–20

Arc of Appalachia Wildflower Pilgrimage

30+ field trips led by experienced botanists and naturalists. www.highlandssanctuary.org/Wildflower/Pilgrimage.htm

Wednesday–Sunday, April 23–27

58th Annual Smoky Mountain Wildflower Pilgrimage

Online registration ends April 18 at www.springwildflowerpilgrimage.org.

Saturday, May 3

INPAWS Hike in Duning Woods Nature Preserve, Wayne County. Spring flora and mesic forest. Led by Tom Swinford.

Saturday, May 10

INPAWS Plant Sale and Auction. Trinity/St. Richards Episcopal Church, Indianapolis, 10:00 a.m. to 12:30 p.m.

Saturday, June 7

INPAWS Tour of Whiteside Arboretum and Gardens, Coles County, Illinois. Natural habitat gardens and genus collections. Led by Dr. Wes Whiteside.

Saturday, June 21

INPAWS Hike in Pokagon State Park, Steuben County. Wetlands and mesic forest. Led by Dr. Paul Rothrock and Rich Dunbar.

Watch for announcements of INPAWS events and field trips in the mail, via e-mail, and at www.inpaws.org.

on prioritizing/planning invasive control work? Volunteers are sought to help organize sessions or topics.

To share your thoughts, or to become involved in planning this significant event, please contact INPAWS Invasives Chair Ellen Jacquart at 317-951-8818 or ejacquart@tnc.org.

Field Identification Skills Sought

The U.S. Forest Service Northern Research Station seeks individuals with strong plant identification skills to apply for summer field crew positions as Vegetation Specialist (Botanist/Ecologist, GS 7 or 9). The Forest Service is taking a comprehensive forest inventory in 24 states, including data on trees/saplings/seeding, down woody material, and vegetation diversity and structure. Working in multi-person crews, vegetation specialists will identify trees, shrubs, herbs, graminoids, ferns, and fern allies and assist with other field measurements as time allows. Job details and qualifications are posted at www.inpaws.org.

Indy to Host Major Invasive Plant Conference

The North Central Weed Science Society will hold their annual conference in Indianapolis from December 8 to 11, 2008, and the Midwest Invasive Plant Network will hold their annual meeting in conjunction with it. Preliminary plans are that MIPN will organize two days of invasive plant symposia, workshops, talks, and panel discussions. This will be a great opportunity for Indiana's land managers, researchers,

agencies, land trusts, and native plant enthusiasts to come together on this issue.

Conference organizers would like to know what *you* would like to see covered in the conference: How to control specific species? Talks on new invaders? How to organize cooperative weed management groups? Realistic prevention strategies? Panel discussion on invasive plants in trade? Workshops

In Quest of Campanula

University of Virginia plant ecologists studying the evolutionary and ecological genetics of *Campanula americana* (Campanulaceae) (syn = *Campanulastrum americanum*; common names = American bellflower; tall bellflower) need to locate and collect seed from 40 populations of this species from throughout its range.

They have gathered location information from dozens of herbaria, but many herbarium specimens are quite old and the populations to which they refer may no longer exist. They seek kind-

hearted volunteers to identify local populations of *Campanula americana* and, if possible, to collect seeds. (If in doubt as to its morphology, a decent account of the species can be found at www.missouriplants.com/Bluealt/Campanula_americana_page.html).

The collection process is straightforward, taking no more than 15-30 minutes, and all collection and mailing materials (and funds to cover mailing costs) would be sent well ahead of time. Offers of assistance may be directed to Brian Barringer and Laura Galloway at bcbarringer@virginia.edu.

Indiana State Museum Garden Report

The Watanabe Gardens at the Indiana State Museum contain about thirty species of native forbs and grasses, and a number of native trees and bushes as well. In recent years, the part of the gardens nearest the canal has become too shady for the plants presently in that area, so we are going to move them and install shade-loving plants such as Christmas fern, wild geranium, wood poppy, bloodroot, and wild ginger. *If any of you have wood poppy, bloodroot, or wild ginger that you are willing to share, we could use 20 of each.*

This year, we are again selling packets of native plant seeds, which can be obtained at the Museum Shop and the INPAWS plant sale. They are priced at \$1.50 each, and include wild indigos, milkweeds, asters, coneflowers, etc.—18 varieties total.

Twice a month, a group of volunteers works at weeding, cultivating, pruning and other tasks that help maintain the beauty of the gardens. We work the second and fourth Saturdays from 9:00 to 12:00. If you would be interested in helping while learning more

about these summer bloomers, please contact me (317-849-3105) or the volunteer office at the ISM (317-234-2449). There are some nice fringe benefits for volunteers!

—Dan Anderson, Education Committee

Human Footprints on Indiana

Presented by the Central Indiana Land Trust, a new exhibit at the Indiana State Museum—"Footprints: Balancing Nature's Diversity"—traces the history of humans' effect on Indiana's wildlife and their habitats. Filled with furs, fins, and feathers, it begins with the diversity of species near the end of the Ice Age and continues through settlers' dependence on plentiful wildlife and the impact of modern life on those species. The exhibit runs through August 3. For more information, visit www.indianamuseum.org/footprints or www.cilti.org.



INPAWS Web Site Updated

INPAWS webmaster Marcia Moore has redesigned our Web site to expand the content and make information more readily accessible. Check out the new look at www.inpaws.org.

Battleground State?

Indiana's natural lands, rivers and lakes are turning into biological battlegrounds! In every Indiana county, invasive garlic mustard is stealing away land from our spring wildflowers. Emerald ash borers are decimating our ash trees. Hydrilla threatens to choke lakes and waterways throughout the state. These and other alien invaders are having a devastating impact on our natural resources, and everyone's help is needed to stop their spread. Here's how you can help:

- Learn how to identify the invasive plants that are in your area. Visit www.entm.purdue.edu/caps/ for images and descriptions of many invasive species in Indiana, as well as up-to-date maps of their spread throughout our state.
- Clean dirt and mud off of your vehicle, pets, and boots before going onto public lands.
- Never dump the contents of an aquarium into a water body.
- Do not plant invasive species on your land. Find native or non-invasive alternative species. Visit www.inpaws.org to see a new brochure on invasive garden plants to avoid in Indiana, and non-invasive alternatives to use.
- Volunteer to help inventory or control invasive plants at a local park.

Governor Mitch Daniels has proclaimed June as Invasive Species Awareness Month in Indiana. Throughout the month, The Nature Conservancy and other organizations are conducting workdays and educational workshops to combat exotic species. Visit the Conservancy online at www.nature.org/indiana for a full listing.

Not Alpines but Boreals

Speculating about Indiana alpines is fun, but we have, of course, no mountains. Botanists place certain Indiana "alpines" such as twin flower

(*Linnaea borealis americana*) and bearberry (*Arctostaphylos uva-ursi coactilis*) in a somewhat overlapping group: boreal relicts or boreals. Boreals are the forty or so species that came down ahead of the glacier from hardwood forests ranging from Alaska to Newfoundland and even from more northerly tundra and found they could survive in isolated pockets in the Dunes, and sometimes elsewhere in Indiana, when the glacier retreated.

Familiar boreals include white pine (*Pinus strobus*), paper birch (*Betula papyrifera*), trailing arbutus (*Epigaea repens*), large cranberry (*Vaccinium marocarpum*), and small cranberry (*V. oxycoccos*).

Many boreals like goldthread (*Ceptis trifolia*), starflower (*Trientalis borealis*), small flowered forget-me-not (*Myosotis laxa*), and twin flower prefer cool, moist woods, swamps, or bogs. (In bogs, soil temperature may remain at 57° F year round.) Others, like bearberry, inhabit sand. Bearberry sometimes cozies up to Eastern prickly pear cactus (*Opuntia humifusa*). Both have moisture-conserving leaves—after all, frozen water isn't available moisture. Harebell (*Campanula*

rotundifolia) will show up in foredunes, and sweet fern (*Comptonia peregrina*) "forms large colonies in its favorite habitat—sand flats and barrens."

Scientists like to study plants at the edge of their range where reproduction may be only vegetative. Our local bunchberry (*Cornus canadensis*) produced but a single flower at its last known blooming in 1967. All the plants I've seen appeared with the four leaves of sterile plants instead of the six leaves of fertile ones. How long can a plant population survive by vegetative reproduction alone? The Indiana Dunes National Lakeshore's official bunchberry monitoring plots have disappeared. Locating again two other colonies I found in the early 1990s on tamarrack hummocks will depend on luck. Searchers should work in pairs so as to pull each other out of adjacent swampy pools.

Boreals are also vulnerable to climate change, too-small populations, lack of pollinators, fire (wild or prescribed), deer, and habitat loss, whether anthropogenic or natural. Twin flower, classified as extirpated, succumbed to a moving dune.



Bunchberry (*Cornus canadensis*). Photo by A.H. Barnes, courtesy of National Park Service.

Two success stories: without human intervention, the once state-listed club spur orchid (*Habenaria clavellata*) and dwarf ginseng (*Panax trifolius*) have been found often enough to be delisted.

Further Reading

Swink, F. and G. Wilhelm. Boreal and Coastal Plain Relics. *Plants of the Chicago Region*. Fourth Edition. Indiana Academy of Science. 1994, pp. 47-48. Boreals not listed here are sometimes so classified in individual plant entries.



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Spring Day at Pine Hills



Scenic vistas, stunning geographical features, winding rocky streams, and boreal plant life: all describe Indiana's first dedicated state nature preserve, the site of INPAWS' spring hike.

On April 12, twenty hardy INPAWS members braved cooler-than-normal temperatures to see this special place, several visiting for their first time.

Established some 40 years ago, Pine Hills Nature Preserve is still arguably one of our finest in a system that today boasts over 200 nature preserves. Part of Shades State Park and upstream of better-known Turkey Run, Pine Hills lies nestled in the scenic Sugar Creek valley.

The entrance to Pine Hills is not all that impressive, containing a relatively

young second-growth hardwood forest that is slowly reclaiming the land from a pine plantation established decades earlier. But as you proceed along the trail the forest gradually improves, as oak replaces tulip poplar (*Liriodendron tulipifera*), cherry (*Prunus serotina*), and pine. Soon, you begin to notice more relief in the landscape, more varied plant life on the forest floor, some stately white oaks. Then suddenly you come upon a sandstone backbone perched high above beautiful Clifty Creek, which carves a shallow, sinuous path far below. It is

*Roger L. Hedge, Heritage Ecologist,
Indiana DNR Division of Nature
Preserves*

here on Turkey Backbone that you first realize why Pine Hills is worthy of such high praise and designation as a state nature preserve.

Native white pine (*Pinus strobus*), Canada yew (*Taxus canadensis*), and eastern hemlock (*Tsuga canadensis*) thickly line the steep, nearly vertical sides of this ridgetop trail. In their shadows partridgeberry (*Mitchella repens*), a few scattered wildflowers, and lush ferns grow. Long-stalked hummock sedge (*Carex pedunculata*) is common along the trail's edge.

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INDIANA NATIVE PLANT and Wildflower Society

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All are invited to submit articles, news items, and event postings of interest to our membership. Acceptance for publication is at the discretion of the editor. INPAWS welcomes opposing viewpoints.

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INPAWS Mission

To promote the appreciation, preservation, conservation, utilization and scientific study of the flora native to Indiana and to educate the public about the value, beauty, diversity, and environmental importance of indigenous vegetation.

Membership

INPAWS is a not-for-profit 501(c)(3) organization open to the public. For membership information, visit www.inpaws.org.

News and Views

Information to be shared with INPAWS members may be directed to membership@inpaws.org.

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PRESIDENT'S MESSAGE

In Hot Water

Good thing that summer's here. From April to June, they say, gardeners aren't fit for human contact. In those months, I have days when I wake up busy, full of plans for what needs to be transplanted, watered, deadheaded, or trimmed. I suspect spring is busy for many of us who love to be outdoors—hikers, photographers, botanists, and birders.

I like (and need) the gentle reminder that no matter how frantically I clip and snip my way around my gardens, working to perfect what is already beautiful, nature has its own pace and means for survival.

I went down to our land in Owen County after the June floods. On the way, I saw the sad losses that thousands of people will be dealing with over the coming months. I saw a pretty pond nearly empty because of a great gouge in its dam. I saw golf carts that had floated half a mile into the middle of a corn field, looking like bewildered white mechanical cows.

I rounded the corner and pulled up to our gate. I had fully expected to see a lake of standing water where our low-lying front meadow used to be. At the least, I thought, it would be a sodden mess of flattened plants. Instead, I saw huge drifts of white penstemon—standing tall and perfectly happy. The debris in the trees told me that, only days before, there had been a violent rush of water four feet high and ten acres wide.

It gave me a renewed appreciation for the flexibility and, well, naturalness of nature. We recover, we grow, we shine.

Perhaps the saying is true that we (and native plants) are like tea bags. You never know how strong we are until you put us in hot water.

—Nancy Hill

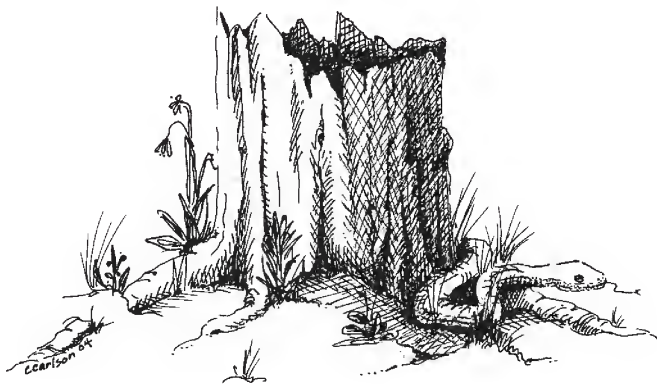


Illustration by Chris Carlson in R.A. Ingraham, *Swimming with Frogs*.

INPAWS PARTNERS

Garden Clubs

National Garden Clubs, Inc. (NGC), recognized as the largest volunteer gardening organization in the world, provides members with educational opportunities in all aspects of gardening and floral design. Indiana's affiliate, The Garden Club of Indiana, Inc., has 106 member clubs boasting 2,500 members in eight districts covering the state.

Since its founding in 1929, NGC has promoted good horticultural practices, civic beautification, and the improvement of roadsides and parks. Their mission has expanded to include the protection and conservation of natural resources. Member clubs assist in the protection of trees, shrubs, wildflowers, and birds and in the preservation and restoration of historic sites. Along with INPAWS and other conservation-minded organizations, The Garden Club of Indiana participates in the Indiana Conservation Alliance (INCA).

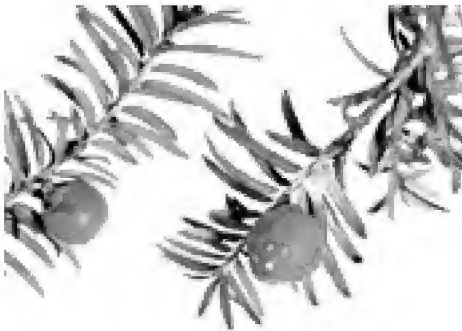
The goals of INPAWS and garden clubs came into direct alignment recently when NGC president Barbara May announced the theme "Nurture the Earth, Plant Natives" for 2007 through 2009. INPAWS has much to offer garden clubs in achieving this goal, for example, providing programs through our Speakers Bureau. Garden clubs also share with INPAWS a focus on youth. The NGC's "Seeds of Tomorrow" project works with schools to teach youth the benefits of native plants, wildflowers, and organic gardening.

Garden clubs grant scholarships to young men and women who plan careers in horticulture or related fields. They assist with plantings at Habitat for Humanity home-building projects. A donation program helps the USDA Forest Service plant potentially productive timberlands and replant forests damaged by fire, flood, and other natural catastrophes. Inspired by the New Jersey Council of Garden Clubs' planting of 8,000 dogwood trees as a living memorial to veterans of World War II, since 1945 the NGC has honored service men and women with its Blue Star Memorial highway marker program.

For more information about garden clubs, visit www.gardenclub.org and www.gardenclubofindiana.org.

Pine Hills, continued from page 1

After marveling over the dramatic views and interesting plant life from this vantage, you eventually come to the backbone's east end and descend a long staircase that takes you down in the ravine bottom where a loop trail follows the creek. This area is a riot of wildflowers and ferns in spring. INPAWS members noted the large, leathery fronds of marginal shield fern (*Dryopteris marginalis*) growing from the base to the top of rich slopes here. Also seen in the humus rich soils near the creek were fragile fern (*Cystopteris protrusa*), hepatica (*Anemone acutiloba*), and notably snow trillium (*Trillium nivale*), which was still in bloom. An impressive patch of wild ramp (*Allium burdickii*) is in this area, although flowers would not appear until later in spring. Leaves of waterleaf (*Hydrophyllum* sp.) and small-flowered leafcup (*Polymnia canadensis*) are common along the trail next to the creek.



Hikers spotted state-endangered Canada yew (*Taxus canadensis*) high up a slope above the stream. Courtesy US Forest Service, USDA-NRCS PLANTS Database.

After making this short loop, we continued along the trail and ultimately had to decide where best to cross the swollen creek to ascend Devil's Backbone. We decided to hike this loop in reverse at this point to avoid the creek crossing; but as it turned out, we still had a second crossing to make and couldn't avoid wet feet. Plants of particular interest in the general area were plantain-leaved sedge (*Carex plantaginea*), leaves of puttyroot orchid (*Aplectrum hyemale*), downy rattlesnake plantain (*Goodyera*



Hike leader Roger Hedge expounds on the relict boreal eastern hemlocks (*Tsuga canadensis*) that are a trademark of Pine Hills Nature Preserve. Photos by Wendy Ford.

pubescens), the brittle stalks of last year's beechdrops (*Epifagus virginiana*), and scattered flowering stems of spring cress (*Cardamine douglasii*).

We had a lengthy discussion about the state-endangered evergreen shrub, Canada yew, which has taken a serious hit from deer browse and today can be found only on the steepest slopes of the preserve where the deer can't reach it. We were fortunate, however, to find a fallen branch in the creek that could be closely examined. Individual needles superficially resemble eastern hemlock, but they are longer and a more intense green than those of hemlock.

After ascending the long slope up the west end of Devil's Backbone, we finally reached the top to enjoy the view. Standing on a six-foot-wide slab of sandstone perched about 100 feet above Indian Creek below us to the north, we were at treetop level with the large sycamores (*Platanus occidentalis*) lining the creek. A small colony of polypody fern (*Polypodium virginianum*) grows in what little soil is available along the edge of this narrow backbone. Behind us on the south

side of Devil's Backbone flowed Clifty Creek. The two small streams join one another to the west and eventually empty into Sugar Creek downstream. Coming down the east end of the backbone, we noted a nice clump of stonecrop (*Sedum ternatum*).

We retraced our steps along Clifty Creek, and made the return climb up the staircase to the top of Turkey Backbone following the same trail we'd hiked earlier. Talk along the trail was lively as we returned to the parking lot. Despite the cold weather, the occasional mist of rain, a brief snow shower, and even one blast of hail, I don't think there was a disappointed soul among the group for their experience of spring at Pine Hills. ■

**If you go...
Take only memories.
Leave only footprints.
Kill only time.**

Make Your Own Dried Specimens

Botanists dry and label specimens of living plant material for storage in an herbarium, but there's no reason a plant enthusiast can't make his or her own dried plant specimens to keep for decades at home. Some of the most valuable specimens in herbaria have come from home collectors.

Collecting

1. Obtain permission. If collecting on private property other than your own, you need to obtain the owner's permission. Most public lands require that you obtain a collecting permit. Contact John Bacone at IDNR (317-232-4054) for permit information.

2. Collect sensibly. To conserve the plant population, do not collect an entire plant if it is the only one in the area. If the plant is large enough, you can collect a small part of it to make a specimen, leaving enough so that the plant continues to thrive and set seed, but this should be done with great caution. Many botanists will not collect a plant unless there are at least 20 of them at the location. If you encounter a plant that you suspect is on Indiana's Endangered, Threatened, and Rare (ETR) List, do not collect it. Instead, photograph the plant and contact Heritage Botanist Mike Homoya at IDNR (317-232-0208).

3. Number the specimens as you collect. This can be done in a field notebook, with information about the location, habitat, size of the plant, who's with you when you collect the specimen, etc. This information is essential for labeling the dried specimen later. The numbers on your collections make them unique so that when a specimen is cited, there's no doubt as to just which one is being referred to.

4. Store collected specimens properly. Pressing plants as soon as they're collected yields the best specimens, but storing them in a plastic bag in a cooler works almost as well. Keep them in the cooler or put the bag in the refrigerator when you get home until you're ready to press the plants.

Pressing

5. Position the specimen for best visibility. Inside a folded sheet of newspaper, place the plant material flat in the way that you want it to appear when dried. Turn some leaves up and some down so the character of both sides will be visible. Place flowers so they can be seen and, if possible, open one of the flowers to expose the inside. Arranging the plant while it's fresh may be difficult, but do the best you can. After being pressed for a day, the plant will turn limp and you can rearrange the parts as necessary.



6. Create the plant press. Put the folded newspaper between blotters and corrugated cardboard and place a heavy object of the same size on top. Blotters may be ordered from herbarium suppliers or cut from desk blotters sold at office supply stores.

Small plants can often be pressed successfully in a used telephone book with weights on top but should be checked daily and moved to dry newspaper if not drying well.

If you plan to collect more than just a few specimens, you might want to make your own permanent plant press or purchase one from an herbarium supplier.

To make a press, cut two 12 x 18 inch sheets from half-inch plywood. Use clothesline to tie these firmly together with the specimen and accompanying newspaper and blotters between them. Smaller presses (about 8 x 10 inches) are useful for pressing flowers separately and may be found at hobby stores.

7. Store the press somewhere warm and dry. Check daily and replace the newspapers and blotters if they become damp. This is especially important with fleshy plants that can mold quickly unless you keep them dry enough. Within a few days to a week, the specimen should be dry enough to mount.

Mounting

8. Use the proper mounting materials. It is important to use only acid-free paper. The standard herbarium sheet size, available from herbarium suppliers, is 11.5 by 16.5 inches. Paper with a high cotton or rag content purchased at an office supply store makes an acceptable substitute for making labels. White glue (such as Elmer's) can be used for gluing down both the specimen and the label.

9. Prepare the label. Label sizes and contents vary greatly; a convenient size is one-eighth of an 8-1/2 x 11 inch sheet of paper (4-1/4 inches wide by 2-3/4 inches tall). For specimens not collected on behalf of a specific institution, the title line, centered at the top, is usually something like *Flora of Indiana*, *Plants of Indiana*, or your own private label like "Herbarium of *Caltha P. Lustris*." The label should convey the name of the plant including the plant authorities, the county and location where collected, habitat, the name of the collector(s), the number of the collection, and the date collected (see figure for suggested placement). Be sure to note the color of the flowers, as

this will not be apparent when the specimen has aged. For specimens that are only a part of the whole, note also the size of the entire plant.

10. Mount and label the specimen. Lay the dried plant material on a sheet of herbarium paper and arrange it in a pleasing way. Be sure to leave space at the bottom right-hand corner for your label. Dab white glue on the back of each piece of plant material and place it where you want it. Lay waxed paper over it and apply a light weight (such as telephone books) to keep it in position. Allow the glue to dry thoroughly.

After your labeled specimens have thoroughly dried, store them in a sturdy cardboard or wood box. Check every few months to make sure they're not bug-infested or getting damp.

Adapted from an article by Kay Yatskievych and Rebecca Dolan in the Spring 2001 issue of INPAWS Journal. Illustrative specimen courtesy of University of Florida Herbarium.

Herbarium Suppliers

Acid-free herbarium paper, paper for the labels, glue, presses, and other materials can be ordered from the following sources.

Pacific Papers, www.pacific-papers.com, 800-676-1151

Herbarium Supply Company, www.herbariumsupply.com, 800-348-2338

Suppliers may have a 100-piece minimum order for herbarium paper. If you want just a few sheets to try your hand at mounting, you can obtain them for a nominal fee from Becky Dolan at Friesner Herbarium, Butler University.

INVASIVES

Invasion of The

Does the creature from the black lagoon scare you? Be afraid, for hydrilla, an aquatic monster in its own right, is invading lakes and rivers in the U.S.

Silently lurking under the surface, *Hydrilla verticillata* forms dense stands of vegetation impossible to swim or boat through. Hydrilla can grow an inch a day! When hydrilla invades, ecologically important native plants are outcompeted and eliminated.

Native to Africa, Australia, and parts of Asia, hydrilla is considered the nation's most problematic aquatic plant, and recently it has slithered its way into our state! It was found in Lake Manitou near Rochester, Indiana, in August 2006. State agencies are working to control it and hoping that it hasn't spread to other lakes.

The closest known population of hydrilla is in Pennsylvania, so how did it get all the way to Indiana? It probably caught a ride by hitchhiking on a boat that was in an infested lake. Or it might have been dumped into the lake by an aquarium hobbyist tired of their fish tank. These are two ways that many aquatic invaders get moved around.

Hydrilla's adaptive qualities enable it to overpower native aquatic species. It can grow in areas of low light, fresh or brackish water, and standing or flowing water. It also absorbs carbon from the water more efficiently than other plants. Its diverse reproductive abilities are especially threatening; it can reproduce by seed, vegetative cutting, turions (dormant buds that form on the stems and drop to the sediment), and tubers. Just a half-inch sprig of hydrilla transferred to another body of water can form a new population, and both tubers and turions are viable for many years.

Hydrilla greatly disrupts the ecological balance of all the areas where it grows. Large, dense mats of hydrilla inhibit sunlight from reaching native plant species that live in the waters below. They slow the movement of water, enabling sediments to build up and creating breeding grounds for mosquitoes. They disrupt or clog the water supply and impede drainage and irrigation, which adds costs to the agricultural economy and negatively affects real estate values that depend upon attractive nearby waterways. They inhibit boating, skiing, and swimming and provide poor habitat for fish and other wildlife populations.



**STOP AQUATIC
HITCHHIKERS!**

Dreaded Hydrilla

Finding even a small population of hydrilla in Indiana cannot be taken lightly. Within three to four years of invading Maine, Massachusetts, and Connecticut, hydrilla was the dominant plant in infested waters, creating serious recreational problems. In an infested lake in Washington, hydrilla out-competed even the highly invasive Eurasian watermilfoil. Florida has spent more than \$50 million trying to control the plant, and still hydrilla occupies about 40 percent of their public waters.

Only complete removal of the plant keeps hydrilla under control. Viable hydrilla fragments make harvesting the plant with large mechanical harvesters difficult, and herbicides or biological control agents can be used only with extreme care. Thus states are focused on keeping hydrilla out of their waterways through a combination of information, education, monitoring, and using divers to harvest identified hydrilla populations while they are still small.

What You Can Do

You can take positive steps to keep hydrilla out of Indiana lakes and rivers:

- Rinse mud and/or debris from boating/fishing equipment and wading gear, and drain any water from boats before leaving a launch area.
- Remove all plant fragments from the boat, propeller, and boat trailer.
- Do not release aquarium or water garden plants into the wild.
- Consider using plants native to Indiana in aquariums and water gardens.

For more information on how to identify hydrilla and other aquatic menaces, go to invasivespecies.in.gov.

Adapted from fact sheets by Indiana Department of Natural Resources and Michigan Department of Environmental Quality, with input from INPAWS Invasives Committee Chair Ellen Jacquart. Drawings courtesy of University of Florida, Center for Aquatic and Invasive Plants.

Watch for Aquatic Invasives



HYDRILLA (*Hydrilla verticillata*) Hydrilla typically has 5 leaves whorled around the stem, although that number can range from 2 to 8. Leaves have distinctly serrated edges. Individual leaves can range from 1 to 2 cm. If nut-like tubers are found on the roots, the plant is definitely hydrilla.

If hydrilla is discovered, please report immediately to the Aquatic Invasive Species Coordinator at 317-234-3883. Hydrilla is illegal to possess in Indiana!



BRAZILIAN ELODEA (*Egeria densa*): Brazilian elodea is an exotic invasive aquatic plant. This plant has 3 to 5 leaves per whorl although 4 are most common. Serrated leaf edges are not visible. This plant can have leaves up to 4 cm, making it much larger than the other plants described. Tubers do not form on the roots.

If Brazilian elodea is discovered, please report immediately to the Aquatic Invasive Species Coordinator at 317-234-3883.



ELODEA (*Elodea canadensis*): Elodea is a native submersed aquatic plant. Elodea usually has 2 or 3 leaves per whorl. Serrated edges of the leaves are not obvious. Leaves can be up to 1.5 cm although usually they are much smaller. Tubers are not produced on the roots.

Elodea is a beneficial native plant. Reports are not necessary if you discover this plant.



Nine Hundred Miles from Home, Part 1

Nature celebrated July 4, 1976, by painting a broad purple ribbon along the edge of a shallow Duneland lake near me. A friend, Joel Greenberg, says the sight “was reminiscent of a canvas by Monet, if he had abandoned Giverny for the Dunes.” Up close, this ribbon turned out to be a myriad of carnivorous, somewhat orchid-like purple bladderwort (*Utricularia purpurea*), one of Indiana’s seventy or so Atlantic Coastal Plain disjuncts or “CPs.”

Unlike the boreals, our other category of journeying plants, CPs jumped over the intervening miles from their Atlantic and Gulf Coast homes to the borders of the Great Lakes and, with us, to scattered counties away from the Lake.

Experts disagree about how CPs arrived. The late Floyd Swink voted for seeds carried in wildfowl feet. Canadian naturalist E.C. Pielou finds these species the relics of populations once growing along the entire border of the post glacial Champlain Sea, which extended from the Atlantic Coast to Lake Ontario ten to twelve thousand years ago. Others believe the plants traveled north along the Mississippi.

However they arrived, many CPs grow in only a few places in Indiana and are often state listed. (Purple bladderwort is state rare—and, at least temporarily, absent from its Bicentennial habitat.) Most prefer sand near Lake Michigan, or, away from it, blow-outs in oak savanna or sites with varying amounts of damp, often shaded.

Some clues to finding and enjoying CPs:

Foredune-loving marram grass (*Ammophila breviligulata*) is especially beautiful when the wind uses its leaves to inscribe sweeping arcs, segments of perfect circles, in the sand. For extra charm, find arcs decorated with bird or lizard tracks or both. The plant’s long runners make it the great dune stabilizer.

Hidden in marram grass or even flourishing in open sand, find annual, state-rare seaside spurge (*Euphorbia polygonifolia*). It’s a “belly plant”; emerging plants resemble groves of one fourth- to one half-inch palm trees. Mature plants press their polygons flat in the sand to avoid wind damage. Nearby, the annual mustard-family sea rocket

PLANT SALE RECAP

Trinity/St. Richard’s Hospitable to Plant Sale

Trinity Episcopal Church/St. Richard’s School proved a great venue and welcoming hosts for the 2008 INPAWS Plant Sale and Auction. The new location in the school gym provided more space than was available in previous years, plus ample parking convenient to the sale. With improved logistics, the usual great supply of native plants, and increased interest in the merits of native plants, the sale was a huge success.

When the doors opened at 10:00 a.m., the line of customers eagerly descended on the rows of tables filled with wildflowers, ferns, grasses, bushes, and trees. When they had filled their plant needs, they were able to browse tables filled with books on wildflowers, gardening, and other nature-related topics or peruse the plants set up on the stage for the upcoming auction.

Many thanks to the INPAWS members who donated plants or helped with the sale. As those who have volunteered in the past know, a lot of work is involved, but it is enjoy-

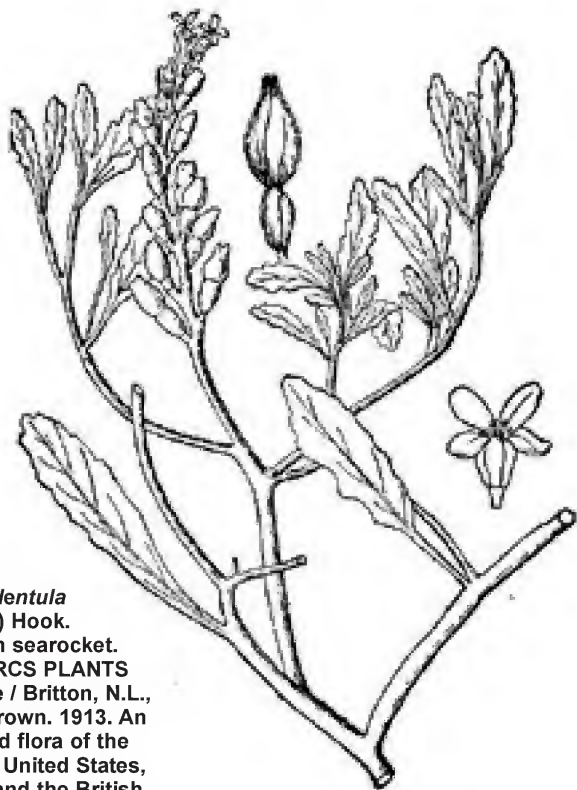


Hilary Cox extolled the virtues of many a native plant at auction, assisted by auctioneer Mike Stelts. Bidders rewarded INPAWS with high bids.

able work. Seeing the whole thing take shape in just a few hours on Friday evening and Saturday morning is really amazing.

“Organized chaos” best describes the scene Friday as carload after carload, and sometimes truckload, pulls up

Cakile edentula
(Bigelow) Hook.
American searocket.
USDA-NRCS PLANTS
Database / Britton, N.L.,
and A. Brown. 1913. An
illustrated flora of the
northern United States,
Canada and the British
Possessions. Vol. 2: 196.



(*Cakile edentula*) may also inhabit the upper beach or fore-dune, its white to purple flowers lasting from early June to past Thanksgiving. Edentula suggests the plant is edible; Peterson says leaves are “fleshy, peppery-pungent” and advises boiling everything except roots and flowers for five to ten minutes for a cooked vegetable. Leaves and young seed pods are good in salad. More important to the plant, the beaked seed pod has two chambers, one to fall to proven growing conditions beneath the parent plant, the other, inflated, to float to a new home.

Some Books

Greenberg, J. *A Natural History of the Chicago Region*. The University of Chicago Press, 2002.

Peterson, L. *A Field Guide to Edible Wild Plants of Eastern and Central North America*. Houghton Mifflin, 1978.

Pielou, E.C. *After the Ice Age: The Return of Life to Glaciated North America*. The University of Chicago Press, paperback edition, 1992.

Swink, F. and G. Wilhelm. *Plants of the Chicago Region*. Fourth edition. Indiana Academy of Science, 1994.

at the door and brings in their plants. While some plants are pre-marked (always appreciated), those that aren't are usually quickly labeled by the knowledgeable volunteers. However, there are always some that cause discussion and debate over their identity, whether or not they are native, and, if not native, whether they are invasive. We do sell the non-natives as long as they are not invasive and are marked as non-native.

While we attempt to keep track of those who volunteer their time, the list is usually incomplete. Because of this I won't attempt to list all who helped. But special thanks are in order for auctioneer Mike Stelts and auction spokespersons Hilary Cox, Sue Nord Peiffer, and Kevin Tungesvick for their help in making the auction such a success. I would also like to recognize first-time volunteers Mike Campbell, Hollyn Hartlep, Laura Hohman, Kay Koch, Christy Krieg, Jackie Luzar, and Ross Nelson. Of particular note in that group are three second-generation volunteers, Karen Hartlep's daughter Hollyn, Ruth Ann Ingraham's daughter Christy, and my daughter Laura. Hopefully they enjoyed their first experience with the sale and will all be back next year.

Finally a special thanks to those who stayed to help with the cleanup. This is always the least enjoyable job, but one of the most important.

As always, next year's sale will be even better. If you have any comments or suggestions, please let me know (hohmantr@aol.com). Because of the success with this year's location, we have already made arrangements for Trinity/St. Richard's to host the sale again next year.

Tom Hohman
Chairperson, 2008 Plant Sale and Auction

INPAWS thanks these Nurseries and Landscape Contractors who donated materials for the sale:

Allisonville Nursery & Landscaping, Fishers
Altum's Horticultural Center & Gardens, Zionsville
Hobbs Nursery/Becker Landscape Contractors,
Indianapolis
Beineke's Nursery, West Lafayette
J.F. New & Associates, Walkerton
Mark M. Holeman, Inc., Indianapolis
Munchkin Nursery & Gardens, Depauw
Native Plants Unlimited, Fishers
Spence Restoration Nursery, Muncie
Winterhaven Wildflowers and Native Plant Preserve, West
Point
Woody Warehouse, Lizton

A Day of Superlatives

INPAWS Ventures to Coles County, Illinois

First I must thank Kevin Tunesvick for the above title which suits our excursion to Coles County, Illinois, better than anything I came up with! On our prolonged return trip we had a humorous discussion about writing this article...even though at that point we didn't know that I would actually be writing it! The title is especially apt coming from Kevin when two of his passions were superbly satisfied that day. Some INPAWS members may be aware that, before the plant world engulfed him, Kevin was a meteorologist. And anyone who lives in central and south central Indiana and Illinois will not soon forget the flooding of Saturday, June 7. The meteorologists amongst us seemed as surprised as anyone by the day's weather phenomena and the destruction they wreaked. Thus Kevin was in his (first) element.

Trip leader Mike Homoya had asked me to give him a lift to Illinois that day (he was to meet his wife there), and, not one to pass up an opportunity, I had arranged to turn up at his house a little early so I could take a peek at his cactus garden. A peek is all it turned out to be, mostly from his kitchen window, as the rain just didn't stop. In fact, it continued torrential most of the morning. In one short lull—when it was only raining, not pouring—we squelched around to look at his southwestern cacti, such as *Cholla* (I want one!), bravely defying the odds here in central Indiana. The next downpour soon forced us back inside.

We had also planned enough time for Mike to see my "oasis," as he later



aptly described my antique farmhouse, though he was alluding to the encroaching development all around me, not to the lake it was about to become. Instead of touring my gardens, we stood in the garage doorway and watched the continuing onslaught of water (can't call it rain!) as first Dee Ann Peine then Kevin arrived and made a dash for shelter.

Having checked the National Weather Service (www.nws.noaa.gov) and Google maps to determine our best route—Did we want to aim for an area where they already had a flash flood warning in effect (I-70), or take my preferred route, which was still only under a flood watch (US Hwy 36)?—optimists all, we set off on our adventure.

I drive about 30,000 miles annually, traveling across the country at least twice during times when I have to dodge winter storms: in late November/early December as I head from Indianapolis to Tucson, and then again in late March/early April as I head home. I've met winter storms head on in the form of rain, ice, or snow...yet I think the weather this trip may have been as bad as the worst of these! Road conditions were definitely more challenging than any I have ever seen over such a wide area. We encountered many a flooded road, none yet closed, until we arrived in Illinois where US 36 was flooded out. We detoured slightly (good thing we can all read maps!), stopped at a roadside historic marker to eat our picnic lunches, and arrived at our destination only about ten minutes late.

Professor Wesley Whiteside was sitting on a bench in his somewhat water-logged driveway, looking as if he wasn't really expecting anyone to turn up. He was obviously happy to see us. It was also obvious at first glance that we were in for a treat.

My first stop (I drink coffee on longer road trips) had to be his bathroom, which just happened to be next to a wonderful little conservatory full of beautifully cared-for African violets...a foretaste of things to come.

The first plants to draw oohs and aahs were his magnolias, under some of which he had been seated on our arrival: *Magnolia macrophylla* (bigleaf) and *M. ashei* (Ashe's) having seeded and crossed and seeded

again and grown to maturity all over his property. Just as a sideline: Ashe's magnolia is endemic to Florida and endangered in its own state; yet there in central Illinois they were thriving very happily.

Although we were expecting several other people, no one else had turned up yet. I think Prof. Whiteside was a little anxious at first, as the ground was decidedly squelchy, plus he didn't want to be out of sight if anyone else did arrive, so he led us to the closest section of his gardens where it was slightly drier and where there were a lot of native forbs interplanted with non-invasive perennials; plus, in a shaded area in one of many specially prepared beds, some *Cypripedium reginae* (showy lady slipper) blooming their heads off.

As a few more people joined us, we wandered further into his self-made "jungle," interspersed with unusual "flower" beds. Of the latter, the one that drew most comments (Dee Ann instructed me to take "plenty of pictures") was the bog garden with its bug-eating beasts such as *Saracenia* spp. (pitcher plants), *Dionaea* (Venus flytraps), and *Drosera* spp. (sundews.) I am fortunate to have seen our native pitcher plants and sundews growing in northern Indiana, but have never wanted to go the extra mile required to grow them at home. This decision was reinforced when Prof. Whiteside explained that he takes out the whole bed once every two years to rebuild the soil and



Ashe's magnolia (*M. ashei*), endangered in its home state of Florida, thrives in Whiteside's unique Central Illinois garden. Photos by the author.

maintain the correct requirements (high moisture, low nitrogen/pH) for these unusual plants!

What became more and more surprising as we continued our perambulation was that he could keep up with it all. Here was another "special" bed with *Cypripedium kentuckiense* (Kentucky

lady slipper); there a bed with *Trillium maculatum* just going over. How on earth does he do it? Not to mention his roses, all in beautiful condition, not a black spot nor an aphid on them, no rose slug holes (they used to be my biggest bugbear in the IMA Formal Garden back in the day...). We saw no sign of a daily staff, although someone did turn

Wesley Whiteside Arboretum and Gardens

The beginning of the five-acre garden can be traced back to Wesley Whiteside's undergraduate degrees from Black Hawk College and Augustana College, and his graduate degrees from the University of Illinois and Florida State University. Wes was then employed in 1960 in the Botany Department at Eastern Illinois University at Charleston, Illinois. His purchase of farm land on the east edge of Charleston that became the garden was made in 1962.

The initial plan for the garden was to develop a collection of woody plants, especially those native to the eastern and southeastern United States. Perhaps best represented are the magnolias, not only many of the popular Asiatic representatives, but also all six species and three subspecies native to the southeastern United States, many of which have been neglected horticulturally.

Probably no plant in the garden receives more comment than the native big leaf magnolia with an almost month-long display

of large white flowers in late May and early June. Another noteworthy woody plant is the Ben Franklin Tree with a succession of three-inch white flowers for over two months in late summer and autumn. Discovered in 1760 in only one site in southeastern Georgia, it was last observed growing as a wild plant in 1803.

Other woody plants rarely seen in the Midwest include the silk camellia, the mountain camellia, the Georgia plume, and the Alabama snow-wreath from the southeastern United States. Also included are the Alaska weeping cedar from the Pacific Northeast, the cedar-of-Lebanon from Asia Minor, and the false camellia, Chinese wax shrub, umbrella pine, and orjama magnolia from eastern Asia. Additional components include plantings devoted to roses, hardy cacti, carnivorous plants (including several hundred Venus-flytrap plants), wildflowers, winter-flowering plants, and an extensive collection of daylilies. Several goldfish pools provide planting areas for waterlilies and other aquatic plants.

Description courtesy of Coles County, Illinois, Historical Society.

up to check if he needed help with a chainsaw, the storm having brought down at least one of his magnolias. And then there was his *Franklinia alatomaha* bed. I first encountered this tree at the Bartram house and garden in Philadelphia, so knew the history on this unusual and rare plant (discovered by botanists John and William Bartram in the mid-1760s and named after John's friend, Benjamin Franklin), but they are not the easiest tree to either find or grow.... Well, of course, when we were magnanimously offered some seedlings of this neat little tree, guess who said yes? I am now the proud owner of several seedlings and just hope that I can keep them alive, apparently best attempted in pots for a few years until large enough to be planted in the garden. We'll see.... And whilst we were all gawking at these, Kevin had gone off on an exploration of his own, having noted a specimen of *Taxodium ascendens* (pond cypress) growing in another part of this Illinois wonderland.

Mike's wife, Barb, had joined us in the meantime, and we had by now been walking around for several hours. As our little group had to get back to various flooded areas of Indiana, we needed to take our leave. Suffice it to say, we took much longer getting home than getting there! But that's another story.

However, on one thing we were unanimous, and here I quote Mike directly: "We were in awe of [Wesley Whiteside's] talent and the effort that must go into creating and maintaining such a collection. He is truly remarkable."

Our thanks go to Mike for organizing this trip and to Professor Whiteside for sharing his collection in every sense.... Oh yes, I am also the proud owner of a bigleaf magnolia, which Kevin is convinced has strains of *M. ashei*. But please, don't expect my garden ever to reach the standards of a Whiteside Arboretum and Gardens.... I just don't have that kind of energy! ■

INPAWS INITIATIVE

Youth Outreach Begins, Supported by the Letha Queisser Memorial Fund

Donovan Miller, Chair, INPAWS Youth Outreach Committee

We INPAWS members have knowledge about the out-of-doors that many adults and certainly most children do not. Mixed with a little folklore and your enthusiasm, what may seem common knowledge to you is more than enough to take kids on an exciting hike.

The Youth Outreach Committee was formed in early 2008 to help capture the natural curiosity of children by turning them on to the wonders of nature. The committee is implementing the INPAWS Executive Board's decision to use the Letha Queisser bequest to promote activities that help bring children into contact with nature. This new venture is in harmony with the national "kids to nature" movement à la Richard Louv's *Last Child in the Woods* and the vernacular Nature-Deficit Disorder.

Letha Queisser was a member of INPAWS and known as Indiana's Wildflower Lady. Educated as a botanist, she introduced our own Ruth Ann Ingraham to Indiana native plants. When she died the winter before last, her many friends honored her by giving memorial gifts to the Indiana Native Plant and Wildflower Society. (See Ruth Ann's tribute in the Summer 2007 edition of *INPAWS Journal*.)

Expertise Not Required

Working with youth is an activity that many members of INPAWS can do. It does not require knowledge of all plants and their scientific names. What we are aiming for at this stage of a child's life is to "hook 'em" on nature and wild places by getting them interested in even the simplest things.

Perhaps sharing with you a little of my experience will illustrate. My initial reaction to this idea was self-doubt and worry that I might not be prepared to lead an activity with a group of elementary or middle school children. Would they listen to me? Would they just be rowdy and go running through the woods? What would I say if they brought me a leaf, flower, or seed and I had no idea?

With all these trepidations, on May 5, I "bit the bullet" and led a series of 30-minute walks with elementary school children at Skiles Test Park. Teachers were present to direct attention and manage disciplinary issues, which were few.

Early in the walk we identified poison ivy. I talked about the leaves of three, pointed out the reddish tint of new leaves, and explained that it is a vine creeping on the ground that will climb trees. I discussed how to protect oneself with proper dress and general avoidance. As we walked, I grabbed a sprig of garlic mustard, crushed it and passed it around, and talked about its invasive behavior.

Along the trail were pockets of Solomon's seal, cut-leaved toothwort, bloodroot, and May-apple which gave me opportunity to point out and talk about the impact of the invasive bush honeysuckle and how it shades out the desirable woodland plants. When I came across some bedstraw, I flicked a sprig on the closest kid to his/her delight. Inevitably, a kid would ask "Where do these funny plant names come from?" And that gave an opening to talk a little plant folklore, which the kids loved.

I pulled down a maple branch with its inflorescence still intact and asked for an explanation. Could anyone identify the leaf? What was all this hairy green stuff hanging down? I talked about the flowering of trees and all plant life, whether showy or not to us humans. When a kid gave a correct answer to a plant question, a little recognition from me went a long way.

They did bring me plant parts, point at others, and ply me with questions beyond my knowledge, but instead of feeling inadequate, I was aware that I had been successful—I was getting



Stamping out garlic mustard at Skiles Test Park. Photo by the author.

kids interested in the natural world. At the end of the event, I was tired, slightly hoarse, but deeply satisfied with how the day had gone.

Our Approach

Our committee will start working with youth in Central Indiana, but we hope to spread our efforts statewide. The basic model is two-fold:

- Provide transportation for student groups who have no funds for field trips, and
- Have INPAWS members offer their knowledge and enthusiasm during the visits.

Committee brainstorming and discussion have focused on these priorities:

- (1) Identifying ideal program sites for field trips;
- (2) Identifying student groups who wish to make field trips but cannot because of financial barriers or lack of nature leaders;
- (3) Engaging INPAWS member participation in the field trips.

Initial Sites

As a starting point, the committee has identified two existing Indianapolis area locations whose programs mesh with our aims: Marian College Ecolab, and Skiles Test Park.

The Ecolab program is most developed, with two-hour field trips including an hour of walk-around instruction and a second hour of student hands-on participation. Students can take part in a restoration activity, pull garlic mustard, install plant plugs, collect seeds, etc.

Marian College faculty lead the hikes and instruct the students. We members can participate in several ways: pointing out plants during hikes, helping with a planting activity, assisting with an eradication effort, and generally sharing our enthusiasm and love for nature.

At Skiles Test, the program is in an emerging phase where we can help identify the plant populations, lead nature hikes, and have some role in shaping the program effort.

Objectives

Our committee has set a goal to fund 10 field trips in the next year with \$1,000 from the Letha Queisser Memorial Fund. Over the summer, we are getting the

word out to classroom teachers about the availability of these funds. An application process is in place, and teachers' initial responses have been highly favorable and enthusiastic.

The INPAWS Youth Outreach effort has a place for YOU to participate in getting kids interested in nature. We need members to assist in leading the groups, not just those supported by the Queisser Fund, but also other groups at the Ecolab and/or Skiles Test Park who request assistance. Watch for email messages publicizing the time and place of field trips and seeking your participation as coordinated by Donovan Miller.

The typical time commitment is two hours at the site. You can ease into group leadership by teaming up with someone who has previously volunteered. If you worry, like I did, whether you have the necessary skills, I assure you that a sense of empowerment will be yours after that first field trip. I urge you to give it a try. ■



Recent Donations to the Letha Bolles Queisser Memorial Fund

Anonymous
William & Lynn Boatmen
Gwen & Brent Harvey
Dottie & John Heseman
Tom Hohman
David R. Queisser
Pat & John Sieloff
The National Bank of Indianapolis
Trailing Arbutus Garden Club

In Memory of Rolland Kontak

Mildred Kontak
Susan & Ted Ulrich

In Memory of Dr. William F. Fechtman

Carolyn & Dave Queisser

Contributions to the Fund are gratefully accepted. To make a donation, please contact INPAWS Treasurer Kathleen Hartman. Drawing by Carrie for Hampshire School Nature Watch.

Indiana Establishes Invasive Species Task Force

June 2008 was the third annual Invasive Species Awareness Month in Indiana, and Hoosier legislators have heard the call.

During the 2007 legislative session, Representative Clyde Kersey (D-Terre Haute) and Senator Sue Landske (R-Cedar Lake) sponsored a resolution to establish an Invasive Species Task Force in Indiana. Its charge: To "study the economic and environmental impacts of invasive species in Indiana and provide findings and recommendations on strategies for prevention, early detection, control and management of invasive species to minimize these impacts."

This task force is now writing a report to the Natural Resource Study Committee that will contain their findings on the status of invasive species and their management in Indiana, and what recommendations they have to improve the state's ability to address this issue.

Information on the task force can be found at www.nature.org/wherewework/northamerica/states/indiana/news/news2618.html, and the final findings and recommendations document will be posted there when it is completed in early July. Ultimately, a package of invasive species legislation based on these recommendations may be developed for the 2009 legislative session. Watch future issues of *INPAWS Journal* for updates and how you can help in this effort.

Task Force Members

Phil Marshall, State Entomologist (co-chair)
Ellen Jacquart, Invasive Plant Species Assessment Working Group and The Nature Conservancy (co-chair)
Doug Keller, DNR-DFW Aquatic Invasive Coordinator
Bob Waltz, State Chemist
Jack Seifert, State Forester
Sandy Norman, Board of Animal Health
Keith Ruble, Vigo County Parks
John Miller, Oak Heritage Conservancy

Steve Yaninek, Purdue University Entomology Department
David Lodge, Notre Dame Center for Aquatic Conservation
Rick Haggard, Indiana Nursery and Landscape Association
Lynn Dennis of The Nature Conservancy is assisting the task force in carrying out its duties and communicating with legislators.

INPAWS Advocates for Feds to Address Invasive Pests

Encouraged by Invasives Committee chair Ellen Jacquart, and with the consent of the Executive Council, INPAWS' president has written to Hon. Edward T. Schafer, U.S. Secretary of Agriculture, supporting federal rulemaking with the goal of virtually eliminating the introduction of forest pests via imported live plants by 2015. An abbreviated version follows:

Dear Secretary Schafer:

Invasive insects and plant diseases are taking a disastrous toll on the native plants of the United States. Unfortunately, rates of introduction and establishment of new invaders have increased dramatically in recent years, and many of these recent introductions have been associated with imports of live plants.

The Indiana Native Plant and Wildflower Society...[is] greatly concerned that pests and pathogens brought in on imported live plants have the potential to devastate the native vegetation in Indiana, threatening both economic and environmental harm.

In recognition of the importance of the live plant pathway, the USDA Animal and Plant Health Inspection Service (APHIS) has begun revision of the regulations governing most plant imports... (the "Q-37" regulations). ... In hopes of facilitating this important rulemaking, a working group drawn from the Continental Dialogue on Non-Native Forest Insects and Diseases has developed a set of consensus recommendations for addressing these risks....

We are writing to ask that you take personal action to ensure that the Q-37 rulemaking has a high priority within the Department and that it proceeds as rapidly as possible. Furthermore, we hope that you will find the consensus recommendations worthy of your support as the rulemaking proceeds.

Sincerely,

Nancy Hill, President
Indiana Native Plant and Wildflower Society

Eastern Native Grass Symposium Announced

The 6th Eastern Native Grass Symposium will be held in Columbia, SC, October 7–10, sponsored by Clemson University and the South Carolina Native Plant Center. Plenary speakers will delve into many aspects of preserving, restoring, and managing native grassland communities in the Eastern US and Canada. Subject areas include natural grassland communities as well as managing grasslands for wildlife, livestock, and bio-fuel potential.

Field trips are planned to sample South Carolina's diverse physiography and numerous instances of plant species at their northernmost or southernmost occurrence; tours will include management research, seed source development, and natives-based wildlife enterprises.

Participation is invited by researchers, extension services, government agencies, agriculture, industry, and environmental or gardening groups. Information and a call for papers are available at www.clemson.edu/~bstrngr/E_Native_Grass. Instructions are provided for submitting title/summaries for oral and poster presentations.

2008 Natural Resources Leadership Development Institute

The goal of the Natural Resources Leadership Institute is to develop leaders within the natural resources communities who can build collaborative relationships with others around contentious issues. By applying the skills learned in the program, NRLDI graduates will be more knowledgeable about how to work collaboratively with others, build consensus, and find sustainable

solutions to complex environmental issues.

The program is structured around three 3-day sessions held at various state park lodges. The dates for 2008 are:

- Sept. 10-12, Turkey Run State Park
- October 15-17, Spring Mill State Park
- November 12-14, McCormick's Creek State Park

The program is geared to men and women who represent a geographic cross-section of the state as well as various state and federal agencies and NGOs with a stake in the sustainability of natural resources. The participants also have a commitment to seeking collaborative, consensus-based processes. Participants are expected to complete various readings, activities, homework assignments, and role-playing activities.

Application deadline is August 1. To apply, download an application at www.agriculture.purdue.edu/fnr/nrldi/application.pdf. Fee \$500 excluding travel. For further information, contact Dr. Janet Ayres, Purdue University, Dept. of Agricultural Economics, 765-494-4215 or ayres@purdue.edu.



Illustration by Chris Carlson in R.A. Ingham, *Swimming with Frogs*.

Urban Neighbors Promote Wildlife Habitat

Indianapolis's historic Cottage Home neighborhood, bounded by 10th Street, Michigan Street, I-70, and Oriental Avenue, is making a home for more than its human residents. Neighbors formed a GreenTeam in 2007 to pursue certification for the Cottage Home Neighborhood as a Certified Wildlife Community in partnership with Indiana Wildlife Federation. The GreenTeam is enhancing and preserving the neighborhood's natural environment so as to retain and promote wildlife in the area. A number of Coopers hawks and screech owls, along with a variety of song birds, butterflies, bats, and salamanders, are counted as residents.

In the last year, the team held a bat house making workshop, participated in spring and fall neighborhood and waterway cleanups, conducted educational programs for neighborhood children, planted native plants, and sold native seeds to the neighbors. Three neighbors have graduated from the Indiana Wildlife Federation's Habitat Steward Program. Plans include replacing invasive plants from the nearby Pogue's Run corridor with native plants and working with neighbors and businesses to provide for wildlife.

Central to Cottage Home's goal is to encourage individual neighbors to certify their backyards as wildlife habitats. The four basic components to certification are providing wildlife food, cover, water, and a place to raise their young. For more about the National Wildlife Federation's backyard certification program, visit www.nwf.org/backyard/certify.cfm. Cottage Home Neighborhood Association holds an annual neighborhood tour and maintains a website at www.cottagehome.info.

Coming Up

Saturday, August 9
INPAWS Hike at Green's Bluff Nature Preserve, Owen County. Forested ravines and hemlock forest. Led by Ellen Jacquart.

Saturday, September 6
INPAWS Hike at Tefft Savanna Nature Preserve, Jasper County. Oak savanna and "coastal plain" marsh. Led by Mike Homoya and Tom Post.

Saturday, October 4
INPAWS Hike at Charlestown State Park, Clark County. Limestone glade flora and rocky forested slopes. Led by Dr. Dick Maxwell, Bill Thomas, and Jason Larson.

Saturday, November 22
INPAWS Annual Conference at Fort Benjamin Harrison, Indianapolis. Principal speaker will be Doug Tallamy, author of *Bringing Nature Home: How Native Plants Sustain Wildlife in Our Gardens*.

Watch for announcements of INPAWS events and field trips in the mail, via e-mail, and at www.inpaws.org.

INPAWS Supports NICHES Land Acquisitions

INPAWS is helping to protect three pieces of Indiana's natural heritage in perpetuity. Our donation of \$3,000 joins sizeable commitments from Indiana Heritage Trust and two land-owners to help NICHES Land Trust purchase three parcels totaling 93 acres valued at \$302,000. NICHES (Northern Indiana Citizens Helping Ecosystems Survive) sets aside a part of its donations for stewardship and is building an endowment that will provide long-term capacity to manage the properties that it protects.

The **Black Rock** parcel protects 45 acres of oak/ hickory woodland, flood-plain forest, two steep-sided shale ravines, and the most prominent sandstone outcrop on the banks of the Wabash River. Black Rock itself sits 110 feet above the water. From Native Americans until today, Black Rock has been an important gathering point for people to share and experience the natural world.

The **Sizemore Tract at Fisher Oak Savanna** adds 20 more acres of wet flatwoods and rolling black oak sand ridges, bringing the Fisher Oak Savanna preserve to a total of 220

protected acres. These encompass white, black, and pin oak savanna that provides habitat for red-headed wood-peckers, bluebirds, hog-nose snakes, legless lizards, and a rich diversity of savanna wildflowers.

To protect **Bachner Nature Reserve**, NICHES is acquiring 40 acres of land that will afford access for fishermen and nonmotorized boaters to Sugar Creek in Montgomery County while enabling NICHES to manage and reforest 28 acres. Reforesting small fields eliminates the amount of edge and increases the total size of the forests in the Sugar Creek valley, both important in the nesting success of forest song birds. Sugar Creek is the one of the most important mid-sized streams in Indiana. Sandstone outcrops and steep-sided ravines have helped to spare this area from total conversion to till agriculture and have protected the largest block of forest left in glaciated Indiana. The cool north-facing ravines hold boreal relicts such as hemlock, canada yew, and white pine.

For more information, visit www.nicheslandtrust.org.

New INPAWS Members

CENTRAL

Lynn Arrowsmith
Hope Baugh
Maxine Berry
Arlene R Bow
Deb Conley
Sonok Y. Deutscher
Pam Duncan
Ris  Friedman
Chris & Ann Gautier
Thomas Graham & Carolyn Hommel
Sue Grizzell
Glenna Haberzette
Brian & Bev Howey
Kathleen Hume
Rita Hupp
Joshua & Emily Jackson
Todd & Sarah Janzen
Pam Knipp
Judith L. Kojetin
Vickie Martin
Judith Mills
John Montgomery
Mary Ann Stewart

EAST CENTRAL

Ann Edwards
Tony Fleming & Victoria Ferguson
Hunter Graves

SOUTH CENTRAL

Laura Hohman
Eleanor Lahr
Vicky Myers
Dick & Barbara Roe

WEST CENTRAL

Stephanie Frischie
Kay & Dale Harris
Mary Kate McKenna

To join INPAWS or renew your membership, visit www.inpaws.org.



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Conference Preview



KEYNOTE SPEAKER 1

Douglas W. Tallamy

*Professor and Chair
Dept. Entomology and Wildlife Ecology
University of Delaware*

Doug Tallamy is the author of *Bringing Nature Home: How Native Plants Sustain Wildlife in Our Gardens*.

As a child, Tallamy learned first-hand about the finality of suburban development as practiced today. Having recently moved with his family into a new house in Berkeley Heights, New Jersey, he spent his summer days exploring the “wild” places that surrounded him.

One of his first discoveries was a small pond where thousands of pollywogs wiggled near its shoreline, and he took great delight in watching them grow each day. One day as he

watched, a bulldozer crested nearby piles of dirt, and—in an act that has been replicated around the nation millions of times since—proceeded to bury the young toads and all of the other living treasures within the pond.

Tallamy has written more than 65 research articles and has taught insect taxonomy, behavioral ecology, and other subjects.

Chief among his research goals is to better understand the many ways insects interact with plants and how such interactions determine the diversity of animal communities. His talk is titled **Gardening for Life**.

In his free time, Tallamy enjoys photography (especially of insects and birds), hiking and backpacking with his wife in remote places, swimming and canoeing, and teaching young people about the importance of the life forms around them.



Growing Native Plants for Wildlife

Indiana Native Plant and
Wildflower Society
15th Annual Conference

November 22, 2008
8:00 a.m. to 5:00 p.m.

The Garrison
at Fort Harrison State Park
Indianapolis



INDIANA NATIVE PLANT
and Wildflower Society

A Departure

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INPAWS JOURNAL is published quarterly for members of the Indiana Native Plant and Wildflower Society. Material may be reprinted with the permission of the editor.

All are invited to submit articles, news items, and event postings of interest to our membership. Acceptance for publication is at the discretion of the editor. INPAWS welcomes opposing viewpoints.

Please submit text and photos via e-mail to wwford@comcast.net or via land mail to INPAWS JOURNAL, 6911 Cabernet Way, Indianapolis IN 46278.

Submission deadlines for specific issues are as follows:

Spring
February 23 for April 1 mailing

Summer
May 23 for July 1 mailing

Autumn
August 23 for October 1 mailing

Winter
November 23 for January 1 mailing

INPAWS Mission

To promote the appreciation, preservation, conservation, utilization and scientific study of the flora native to Indiana and to educate the public about the value, beauty, diversity, and environmental importance of indigenous vegetation.

Membership

INPAWS is a not-for-profit 501(c)(3) organization open to the public. For membership information, visit www.inpaws.org.

News and Views

Information to be shared with INPAWS members may be directed to membership@inpaws.org.

Dear Readers,

We're trying something new—an abbreviated issue of *INPAWS Journal* focusing on INPAWS' 15th Annual Conference. The Conference Committee has assembled an excellent cast of speakers, which you will see as you browse these pages. The theme "Growing Native Plants for Wildlife" is likely to interest many of your gardening friends. Please sign them up and bring them along!

Also in this issue are two items of direct relevance to INPAWS members:

First is information about INPAWS' small grants program for 2009. The deadline for submitting an application is February 1, 2009. Winners of the 2008 awards will be announced in the Winter issue.

Second is a sampling of the tasks that INPAWS members perform to keep the organization going. Volunteers are the foundation of INPAWS. I urge you to express your interest in at least one of the listed areas when you renew your membership for next year—which is readily accomplished by including your renewal with your Conference registration.

Hope to see you November 22, if not sooner.

—Wendy Ford

KEYNOTE SPEAKER 2

Dr. Steve Yaninek

*Professor and Chair
Department of Entomology
Purdue University*

Steve Yaninek serves on the Indiana Invasive Species Task Force and speaks around the world on entomological issues. His achievements at the International Institute of Tropical Agriculture in Nigeria, West Africa, include a successful cassava plant protection program in which he identified, imported from Latin America, mass produced, and released in Africa a series of phytoseiid mite predators. One species is now established in 20 countries, covers an area of more than 2,000,000 km², reduces pest populations by two-thirds, and increases crop yields by a third. The economic impact has been estimated to exceed \$100 million per season in West Africa alone. For this work he won an award from Nigeria for improving the lives of cassava farmers.



Yaninek developed a study-abroad short course that makes on-site visits to migratory Monarch butterfly sanctuaries in Michoacan, Mexico. Each year, an estimated 150 million Monarch adults migrate from Canada and the United States to spend the months between November and March inhabiting a specific fir tree species found on a dozen mountaintops scattered across several states in central Mexico. Six of these locations have been set aside as national sanctuaries to protect the butterflies and the high mountain habitat required for their survival. The course brings students and staff to those sites for first-hand observation.

"The Monarchs we're familiar with in Indiana and the Midwest are part of a much bigger environmental and sociological mosaic that links us with the people, customs, and habitats of Mexico where the monarchs spend their winter," says Yaninek. His talk is titled **How Monarch Butterflies Bring Us Closer to Our North American Neighbors.**



Hilary Cox

Writer, Lecturer, Designer
Leescapes Garden Designs

Hilary Cox lived and worked in Britain, Austria, and France before moving to the U.S., where she volunteered at the Delaware Centre for Horticulture and took gardening classes at Longwood Gardens, Pennsylvania. The IMA's Formal Garden was her "baby" for five summers, 1993 to 1997.



A Master Gardener and charter member of INPAWS, Cox designed and installed demonstration gardens at Orchard-in-Bloom and The Indiana Historical Society. Clients' gardens have been featured in national and local magazines and newspapers, as has Cox's own garden, which is a National Wildlife Federation Certified Wildlife Habitat™. She continues to write for various local and national magazines and lectures on all aspects of gardening and garden design.

The title of her talk is **Underused Natives for Overworked Gardeners**. Says Cox, "During the four month drought of summer 2002, I watched as my lawn turned brown, then crispy; my vegetable garden stopped producing; and some 'ornamentals' wilted and went dormant. By September, when Pam Harper, famed English gardener, authoress, and plantswoman was coming to visit, I was in despair. So to reassure myself, I made a list of plants that were not only surviving but thriving and flowering. Surprise, surprise! The list consisted of 90% Indiana natives, most of which I never see in any other gardens in town. These plants can help

you stop fighting hoses, feeding fertilizer, and fending for your forbs, allowing you to sit back and enjoy a showy garden despite the worst the weather can throw at us!"

Michael Homoya

State Botanist
Indiana Department of Natural Resources

Michael Homoya has been an Indiana DNR Division of Nature Preserves botanist/plant ecologist for the past 26 years. His duties include assessing sites for natural quality and significance, and surveying for species on Indiana's list of threatened and endangered plants. He studied under Dr. Robert Mohlenbrock at Southern Illinois University, receiving B.A. and M.S. degrees in botany. Author of *Orchids of Indiana*, he is currently preparing field guides to Indiana's common forest plants and Indiana ferns.

Does it "Belong"? Considerations in Determining the Nativity of Plants is the subject of Homoya's talk. He will share the botanist's uncertainties and struggles in determining whether a plant is native, to where, when, etc. He will also address practical applications, especially when considering the purpose of the planting—in particular, the implications of plant nativity for natural area restoration.



Jim McCormac

Avian Education Specialist
Ohio Division of Wildlife

Backyards and Beyond: Plant Locally, Save Globally is the subject of Jim McCormac's talk. In an increasingly urbanized landscape, the role of habitat restoration—backyards or bigger projects—takes on growing importance, and the use of native flora is vital to the success of such projects. The talk explores some fantastic and little-known plants and the interesting ecological relationships that spring up around them, the global importance of urban landscapes to winged wildlife, and the big picture of urban landscape roles, showing how, with native plants, we can paint a picture of beauty and biodiversity that no ornamental garden of non-natives can match.

A lifelong Ohioan, McCormac became passionate about natural history at a very early age, and began actively pursuing birds before he was 10 years old. Some 30 years later, his Ohio list stands at 352 species, one of the largest in the state. He has birded in nearly every state and most Canadian provinces, as well as far-flung places like the Australian Outback, Costa Rica, and Guatemala.

McCormac is also a botanist. Before accepting his present post, he worked as a field botanist for the Ohio Department of Natural Resources for ten years, discovering many species new to Ohio and a number of endangered plants. He is interested in the relationships between plants and birds, as well as other animals, and is especially fascinated by rare habitats and flora. He has published numerous articles and papers on botany and ornithology, authored *Birds of Ohio* (Lone Pine 2004), and coauthored the Ohio Floristic Quality Assessment Index, a methodology for evaluating the quality of habitats. He is at work on a book illustrating the best remaining natural areas in Ohio.

Reni Winter

*Owner/Steward
Winterhaven Wildflowers & Native
Plant Preserve
West Point, Indiana*

Winterhaven is a 13-acre mixed-ecosystem property where Reni Winter lives in rural Tippecanoe County. Winter has been studying and growing native plants since 1996, first in South Mississippi and now in Indiana. Winterhaven is a National Wildlife Federation Certified Wildlife Habitat™, funded in part by a DNR Wildlife Habitat grant, and is a certified Monarch Waystation.

Winter's talk, **Monarchs and Milkweed: The Habitat Needs of the Monarch Butterfly** distills what she has learned from her active involvement in the preservation and restoration of monarch butterfly habitat, educating children and adults about the monarch and raising, tagging, and releasing monarchs.

Since European settlers came to North America and started farming and building cities, billions of acres of wildlife habitat have been destroyed, and milkweed, the only host plant for the monarch butterfly to lay its eggs and the only plant on which the larvae feed, is one of the casualties.

Disdained by farmers because its white "milk" is toxic to livestock, and destroyed incidentally by developers along with other native plant species, milkweed continues to disappear at a rate of about a thousand acres a day. It is up to humans intentionally to reverse that trend and increase monarch habitat by planting milkweed, specifically *Asclepias syriaca*, or common milkweed. Free milkweed seeds will be available at this talk, which is recommended as a precursor Dr. Steve Yaninek's afternoon keynote address.



Wendell Zetterberg, Jr.

*Environmental Educator
FrogWatch USA Volunteer*

A resident of north central Indiana, Wendell Zetterberg is passionate about frogs and toads, which, like the proverbial canary in the coalmine, are bio-indicators of environmental problems. "A third of the world's amphibians are imperiled because of human actions," says Zetterberg. "Re-establishing lost habitat with native plants is a great way to help them." The title of his talk is **Why the "Year of the Frog" Is Important to Indiana Amphibians**.

A status migraine that has lasted over five years renders Zetterberg unable to work. Some doctors believe this was caused by exposure to pesticides at a seed corn plant he worked at. Looking into pesticides, he learned how they were also affecting frogs and wanted to help out. He discovered FrogWatch USA and found the perfect way to occupy his time. Three years ago, he found a bullfrog with a deformed hind leg at his sister's small pond, the place where his niece was soon to play, and was greatly disturbed. This prompted him to get involved with environmental education. He now does programs showing nature lovers young and old how amazing amphibians are and why we should protect them.

Zetterberg has volunteered with FrogWatch and the North American Amphibian Monitoring Program for five years, and holds membership in the Hoosier Herpetological

Society and Partners in Amphibian and Reptile Conservation. He founded a local FrogWatch chapter, the Central Indiana FrogWatchers, and sits on the board of an emerging non-profit group, Nature Abounds, which educates and empowers citizens to take ownership of their community through environmental stewardship such as watershed protection, conservation of native flora and fauna, and "going green."

Dean Zimmerman

*Wildlife Biologist
Indiana Division of Fish and Wildlife*

That Dean Zimmerman knows a lot about **Cost Share and Grant Options for Developing Wildlife Habitats** should come as no surprise. As wildlife biologist with the state for 37 years, he has been helping private landowners in six west-central Indiana counties develop habitat on their properties. He has also conducted wildlife surveys, inspected deer and goose damage complaints, done public relations work, and much more.

Zimmerman grew up in rural northeast Indiana and earned a Bachelor of Science degree from Purdue in Agriculture, majoring in wildlife science. He and his wife of 35 years have two sons and one daughter, all married. In his spare time, he enjoys fishing, hunting, landscaping, traveling, and spending time with family.



Indiana Native Plant and Wildflower Society

Small Grants Program Guidelines for 2009

NOTE: February 1, 2009, is the deadline for grant proposals to be submitted.

INPAWS' small grants program supports projects that are in line with the mission of the society. In 1998, the Board allocated \$10,000 from the general fund to begin an endowment account. The interest from this account is available for grants. **The Awards Committee anticipates funding two grants of up to \$500 each in 2009.** These grants can be used in conjunction with other sources of funding for projects that support our mission.

The mission of INPAWS is to promote the appreciation, preservation, conservation, utilization, and scientific study of the flora native to Indiana and to educate the public about the values, beauty, diversity, and environmental importance of indigenous vegetation.

Applications are requested from groups or individuals and must be e-mailed (preferred) or postmarked by **February 1, 2009.** They will be reviewed by the Small Grants & Awards Committee.

Successful awardees **must prepare a poster or other presentation** to share with the membership at the INPAWS Annual Conference after the project is completed.

At the discretion of the Board and membership, **larger awards may be made** from time to time from the assets of the operating budget. Requests for funds for special projects may be made at any time to the Executive Committee. All requests must be made in writing with a clear statement of how the award would further the mission of INPAWS and benefit our membership.

Application Procedures for INPAWS Small Grants Program

1. Cover sheet, including:

- ▶ Name of project
- ▶ Amount requested
- ▶ Location
- ▶ Applicant/contact person information—name, address, telephone, email
- ▶ New or existing project
- ▶ Category that best describes the project—research, training, education, conservation and habitat, demonstration garden, etc.
- ▶ Prior INPAWS funding

2. Text of proposal, not to exceed 2 pages:

- a. Summary of the project, not to exceed 50 words
- b. Clear, concise description of the project, including:
 - ▶ How does the project further the INPAWS mission?
 - ▶ Why is the project needed?
 - ▶ Specific objectives to be achieved
 - ▶ Specific information on how INPAWS grant

funds would be used, including a detailed species list of all plants and seeds to be used

- ▶ Who benefits from the project? How many? How do they benefit?
- ▶ Names of organizations involved, if any, with a brief description of each, including number of members
- ▶ Financial resources committed to the project from other sources, if any
- ▶ Anticipated starting and completion date of the project

3. Budget sheet, showing:

- a. Labor, material, and program costs
- b. Sources and amounts of funds already raised, if any
- c. Total cost of project

Two Ways to Submit Your Proposal

E-mail (preferred): Send 1 copy to smallgrants@inpaws.org, noting the name of your project in the Subject line.

Land mail: Send 4 copies, postmarked by February 1, 2009, to INPAWS Small Grants Program, P.O. Box 30317, Indianapolis, IN 46230-0317.

Volunteer Opportunities 2009

INPAWS is an all-volunteer organization. We count on you to lend a hand in those areas that interest you. Please check at least one of these categories on the membership form when you join or renew.

► **Annual Conference** Meet experts in a variety of fields while staging an education/outreach event of benefit to the community. Volunteer opportunities include event coordination and help with publicity, catering, speakers, exhibitors, set-up/clean-up, book sales, and registration. Detailed notes and documents from previous conferences are available to provide guidance.

► **Conservation** Plan work days with land trusts and parks, represent INPAWS in activities organized by the Indiana Conservation Alliance (e.g., Conservation Day at the Statehouse), and educate legislators and members on conservation issues related to INPAWS' mission.

► **Demonstration Gardens** Create temporary or permanent native plant display gardens or organize garden tours showing Hoosier gardeners what native plants look like and how to use them in their landscapes. A great opportunity for avid gardeners and designers.

► **Education/Outreach** Represent INPAWS at public events such as Earth Day, Flower and Patio Show, Conservation Day at the Zoo, and the Spring Garden Clinic. Opportunities include booth setup/takedown and engaging with the public at the INPAWS booth.

► **Grants and Awards** Evaluate small grant proposals yearly in the spring, or investigate large grant requests as received. INPAWS supports or rewards initiatives that promote the appreciation, preservation, conservation, utilization, and scientific study of Indiana native plants and/or that educate the public about their value, beauty, diversity, and environmental importance.

► **Historian** Maintain and safely store INPAWS records such as Founding Papers, Minutes, Financial Reports, Programs, Yearbooks, Newsletters, and Annual Conference materials. Research past history as needed.

► **Invasive Plant Awareness** Speak to interested groups or bring the INPAWS' invasives display to public events. Develop materials on invasive species, or help distribute these to your local library, nursery, or neighborhood.

► **Membership** Solicit, receive, and track INPAWS memberships and renewals; update the annual Membership Directory; provide labels for mailings; maintain member e-mail list; prepare event reminders for bulk mailing; develop plans to build and enhance the value of INPAWS membership; or simply scan your local area for outreach opportunities.

► **Native Plant Rescue** Save native plants from natural areas under heavy development pressure; overwinter them, then pot and label half the take for our spring Plant Sale/Auction. Regional contacts are needed to scout for rescue opportunities and secure permission to dig. Helpers are needed to care for and transport plants to the sale venue, or to propagate natives using seed collected from members' gardens and the wild.

► **Newsletter** *INPAWS Journal* seeks ideas or expertise that might interest our membership. Writing/editing assistance is provided. Opportunities include roving reporters for trip or event reports; members having a story to tell about their gardens or local initiatives; professional/amateur experts to share their knowledge; and persons with editing, proofreading, photography, or graphic design skills.

► **Annual Plant Sale/Auction** A great opportunity to meet like-minded individuals for a fun, fast-paced day. Volunteers stage a 2-hour sale and 1-hour auction of 100% native-to-Indiana plants. Opportunities for helpers abound, for example: plan the event/location, solicit donations, publicize the event, oversee checkin/checkout, assign volunteer tasks, receive plant deliveries, set up hospitality and education tables, organize plant display, manage auction items, record auction bidding, etc.

► **Programs/Field Trips** Put your planning skills or fresh ideas to use as you collaborate in developing interesting programs and excursions for INPAWS members. The Program Committee meets early in the year to plan talks and outings for March through October timeframe. No member is too new to INPAWS to participate.

► **Publicity** Apply your marketing flair to interest the general public and potential members in what INPAWS has to offer. Help publicize INPAWS events to the membership, coordinate and staff information tables at events around the state, or develop creative ways to share *INPAWS* information with the public.

► **Speakers Bureau** Present a slide show on a topic such as Spring Wildflowers, Summer Wildflowers, Aliens, or Native Trees for the Landscape. Slide shows come with prepared scripts enabling any member to speak to an interested group at the local library or garden club. Volunteers are needed to replicate existing slide shows in Power Point, provide good digital images of native plants, and schedule volunteer speakers for events when invitations arrive.

► **Youth Outreach** Fund youth field trips to natural areas through the Letha Queisser Endowment; help to engage children in nature play and study as a field trip participant; develop programs to bring young people into contact with native plants.

NOTE: The above activities are coordinated by the statewide INPAWS Board of Directors. For volunteer opportunities at your INPAWS regional chapter, contact the chapter president as listed in the Membership Directory or at www.inpaws.org.



Wanted

Milkweed Pods with Seeds

During World War II, children in the Midwest were given the task of gathering milkweed pods and bringing them to their schools to be used in the war effort. The fluff, which is very buoyant and helps retain heat, was used as stuffing for life preservers for the paratroopers. The federal government rewarded the schools that gathered the most fluff.



Now, it is the milkweed seeds that are needed to replenish the North American habitat of the monarch butterfly. Milkweed is the only food of the monarch larvae (caterpillars), and thousands of acres of milkweed are lost each year to spraying, construction, and farmers ridding their croplands of the wildflower because of the toxic qualities found in its "milk."

Winterhaven Wildflowers & Native Plant Preserve in West Point, Indiana, will pay a penny a pod for intact milkweed pods that still contain their seeds. Reenact what the children did during World War II while raising money for your school, church or club and gather milkweed pods! This time, do it for the monarch butterfly, a remarkable creature that migrates thousands of miles to central Mexico every winter, then comes back to the U.S. and Canada in the spring to spend the warmer months here.

Journalist Reni Winter is also gathering stories of the men and women who, as children, collected milkweed pods for the war effort. These stories will be compiled into a book and for posting on the Internet. This is one of the best kept secrets of how the U.S. won the war. Anyone who collected the pods in Indiana or Iowa or anywhere in the U.S. is invited to tell their story.

If you gathered pods as a child for the war effort or want to collect them now to help restore the habitat of the majestic monarch butterfly, contact Reni Winter at milkweedformonarchs@gmail.com or 765-714-4288.

Coming Up

November 22

INPAWS Annual Conference at Fort Harrison State Park, Indianapolis. **To Register:** Download the registration brochure from www.inpaws.org or request a brochure at 317-334-1932. Register by November 1 to secure discount prices.

December 10-11

Midwest Invasive Plant Network Symposium at Hyatt Regency Hotel, Indianapolis. Latest information on invasive plant impacts, control methods, relation of fire and invasives, collaborative projects, and prospects for invasive plant legislation. **To register:** Visit www.ncwss.org and select Annual Meeting from the bar on the left. Register before November 15 to secure the discount price of \$75. Program information at http://mipn.org/2008_Conference.html.

Watch for announcements of INPAWS events and field trips in the mail, via e-mail, and at www.inpaws.org.



INDIANA NATIVE PLANT
and Wildflower Society

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A First for Indiana—Invasive Species Legislation!

Tired of grumbling about invasive species and feeling like you can't do anything about this gigantic problem? Well, now there IS something you can do. Invasive species legislation will be up for a vote in the 2009 legislative session—we need your help to make sure it passes!

Ellen Jacquart, INPAWS Invasives Chair

In 2007, Representative Clyde Kersey and Senator Sue Landske introduced resolutions recommending that the Natural Resources Study Committee “establish a task force to study the economic and environmental impacts of invasive species in Indiana and provide findings and recommendations on strategies for prevention, early detection, control and management of invasive species to minimize these impacts.”

The Legislative Council took these resolutions under advisement and assigned the topic to the Natural Resources Study Committee which in turn created the task force and directed it to report back this past summer.

The 11-person task force represented the wide variety of interests and expertise necessary to address the issue of invasive species. The task force met several times from November 2007 to June 2008 and reached out to many other organizations, agencies, and businesses with vested interests in invasive species, seeking input on the problem of invasive species in Indiana and help with formulating solutions. The findings and recommendations of the task force are



The Bad Guys

Purple loosestrife
Japanese honeysuckle
Asian bush honeysuckle
Reed canarygrass
Autumn olive
Phragmites
Oriental bittersweet
Crown vetch
Garlic mustard
Glossy and common buckthorns

now available. Their report, entitled “At the Crossroads—Invasive Species in Indiana,” can be downloaded at <http://www.nature.org/wherework/northamerica/states/indiana/news/news2618.html>.

The findings and recommendations were presented to the Natural Resources Study Committee at Indiana Dunes State Park on August 26. The Study Committee chair asked the co-chairs of the task force to work with the Legislative Services Agency to draft specific statute language needed

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Autumn olive (*Elaeagnus umbellatus*). By Sarah Swann, courtesy of Hidden Springs Nursery, Tennessee.



INDIANA NATIVE PLANT and Wildflower Society

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INPAWS JOURNAL is published quarterly for members of the Indiana Native Plant and Wildflower Society. Material may be reprinted with the permission of the editor.

All are invited to submit articles, news items, and event postings of interest to our membership. Acceptance for publication is at the discretion of the editor. INPAWS welcomes opposing viewpoints.

Please submit text and photos via e-mail to wwford@comcast.net or via land mail to INPAWS JOURNAL, 6911 Cabernet Way, Indianapolis IN 46278.

Submission deadlines for specific issues are as follows:

Spring
February 23 for April 1 mailing

Summer
May 23 for July 1 mailing

Autumn
August 23 for October 1 mailing

Winter
November 23 for January 1 mailing

INPAWS Mission

To promote the appreciation, preservation, conservation, utilization and scientific study of the flora native to Indiana and to educate the public about the value, beauty, diversity, and environmental importance of indigenous vegetation.

Membership

INPAWS is a not-for-profit 501(c)(3) organization open to the public. For membership information, visit www.inpaws.org.

News and Views

Information to be shared with INPAWS members may be directed to membership@inpaws.org.

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Youth Outreach	Donovan Miller	317-283-1096	djbamiller@aol.com

PRESIDENT'S MESSAGE

The Cat's Meow

Have you seen the greeting card that shows a fluffy six-week-old tabby kitten looking in a mirror and a mature lion with big golden eyes and a full mane looking back? Inside, the caption reads *What matters most is how you see yourself*.

This is how I felt about INPAWS at our recent annual conference when someone said to me, "This was absolutely great. I wish we had an INPAWS in our state!"

I had been fixated on chairs and microphones and speaker introductions, so this person's comment was a gentle 2x4 between the eyes. It made me stop and realize this was a wonderful day. I looked around the room. The noise level was high. People were laughing and chatting, making new acquaintances and catching up with old friends.

We were finishing up a day of inspiring speakers, innovative ideas, and productive contacts. *This* is INPAWS. Yes, the planning and management of a conference can make the best of us feel like a tender kitten at times, but INPAWS is a mature, productive, lively, fast-growing association, rich with creativity and enthusiasm. We provide a platform for hundreds of people to come together, united in their love of and commitment to the native flora of our state.

Thank you to those who have let us know how you'd like to offer your time and talents to our efforts. We'll be contacting you soon. And please, if you haven't already, just drop us an e-mail or call and let us know how you'd like to join the fun. We have so many terrific projects, there is room for everyone.

—Nancy Hill



Blueberries by Chris Carlson in R.A. Ingraham, *Swimming with Frogs*.

INPAWS SMALL GRANTS

2008 Awards

INPAWS' Small Grants and Awards Committee reviewed proposals submitted by February 1, 2008, and made the following two awards:

Demonstration Rain Gardens

\$500 to Hendricks County Soil & Water Conservation District (SWCD) to purchase native plants for two demonstration rain gardens at public locations in Hendricks County.

The traditional approach to handling stormwater has been to move water away from a site as quickly as possible through the use of pipes and ditches. A new approach is to increase infiltration at the site through the use of rain gardens. Rain gardens constructed with native plants can also improve water quality, create or improve wildlife habitat, and beautify the landscape.

The Hendricks County SWCD plans to install two rain gardens—one in an urban setting, the other rural—created with 15 species of native sedges and herbs. One rain garden will be constructed adjacent to buildings at the Hendricks County 4-H Fairgrounds and Conference Complex in Danville. A second rain garden will be created at McCloud Nature Park near North Salem. The overall aim is to educate the public about stormwater runoff and water quality; how and why to install rain gardens; and the use of native plants in rain gardens. The INPAWS grant will help the Hendricks County SWCD purchase 800 native plant plugs.

Educational Materials on Woodland Plants

\$400 to Southern Indiana Botanical Society to purchase educational materials for a native woodland wildflower garden in Floyds Knobs.

The Southern Indiana Botanical Society (SIBS) recently planted a garden of native woodland herbs and shrubs in a 410-acre wildlife sanctuary on the grounds of the Mount Saint Francis Monastery. The garden is located along one of the publicly accessible hiking paths and was developed to provide an example of how native plants can be used in home gardens and landscapes.

With the INPAWS grant, SIBS plans to produce printed literature about the woodland garden plants and a weatherproof box to house the literature. The literature will present information about each of the 21 species planted in the garden. It will also encourage the use of the native woodland plants in home landscapes as alternatives to commonly planted non-native perennials and shrubs.

The deadline for 2009 grant award submissions is February 1. For detailed guidelines, visit www.inpaws.org.

Invasives Legislation

continued from page 1

to implement the recommendations. After reviewing the preliminary draft at the October 20 meeting at Fort Harrison State Park, the Study Committee approved two draft statutes that will be introduced in the upcoming session of the General Assembly. Although the introduced bills will not be available for a month, you may view the preliminary drafts at <http://www.in.gov/legislative/interim/committee/nrsc.html>. Happily, these statutes include all of the task force recommendations—except for, unhappily, the hoped-for funding.

What the Draft Legislation Would Do

Preliminary draft 3471 establishes an 11-member Invasive Species Council (see proposed list of members) for Indiana which has several duties, including:

- Recommending project priorities, funding, and rules and laws to the appropriate entities;
- Recommending a lead state agency to develop invasive species inventories and data management systems for each taxon;
- Communicating with agencies and organizations outside Indiana to enhance consistency and effectiveness in invasive species work;
- Coordinating education and outreach for invasive species;
- Convening or supporting an invasive species meeting at least once every two years;
- Assisting government agencies in reviewing their invasive species policies and procedures and addressing any deficiencies or inconsistencies;
- Assisting state agencies in reviewing agencies' performance measures for accountability on their invasive species actions;
- Receiving reports from any governmental agency regarding actions taken on recommendations of the council; and
- Applying for and providing grants for invasive species education or management.

Creating this Invasive Species Council was the task force's top recommendation, because of the need for better communication and coordination between those working on this issue. Though there are

Invasive Species Task Force

Phil Marshall, State Entomologist (co-chair)

Ellen Jacquart, Invasive Plant Species Assessment Working Group (co-chair)

Doug Keller, DNR-DFW Aquatic Invasive Coordinator

Bob Waltz, State Chemist

Jack Seifert, State Forester

Sandy Norman, Board of Animal Health

Keith Ruble, Vigo County Parks

John Miller, Oak Heritage Conservancy

Steve Yaninek, Purdue University Entomology

David Lodge, Notre Dame Center for Aquatic Conservation

Rick Haggard, Indiana Nursery and Landscape Association



only 11 members on the council, they would have authority to create advisory committees to better include organizations and issues not represented on the council.

Preliminary draft 3496 modifies two existing invasive species statutes. Specifically, the draft:

- Clarifies the scope of authority held by the DNR – Division of Entomology and Plant Pathology (DEPP) over pests and pathogens; and
- Clarifies the quarantine authority held by DEPP.

Because funding is not part of either bill, staff with The Nature Conservancy are in

Proposed Invasive Species Council Members

Dean of Purdue University School of Agriculture or designee

Director of Indiana State Department of Agriculture or designee

Commissioner of Indiana Department of Transportation or designee

State Veterinarian or designee

Department of Natural Resources – Division of Fish and Wildlife's Aquatic Invasive Species Coordinator

Department of Natural Resources – Division of Entomology and Plant Pathology's Terrestrial Invasive Species Coordinator

One individual representing research on invasive species

Two individuals representing industries affected by invasive species

Two individuals representing conservation organizations

conversations with legislators about the possibility of creating a program that would provide matching dollars for landowners, public and private, willing to work together to manage invasive plants cooperatively across property boundaries. While all of us on the task force are extremely pleased with the outcome thus far, this funding would be a giant step forward in stemming the tide of invasive species that are only becoming more and more devastating as global trade increases. We must be sensitive to the economic problems the state and the legislature are facing this session. At the same time, we must not lose ground in this fight.

How You Can Help

We will need calls and letters to legislators in support of the draft statutes that go forward after the session opens January 7. Because things may happen quickly and changes may be made in the statute language, I am asking for anyone interested to please send me their e-mail address and we'll let you know how to help. Send your e-mail address to ejacquart@tnc.org.

**Start the new year out right.
Help us take on the threat of
invasive species!**

New INPAWS Members

CENTRAL

Laura Banks
Deb Bell
Janet Creamer
Becka Davidson
Linda Freund
Les & Holly Geddes
Annette Graham
Judith Houser
Ken Humphrey
Janet Loshelder
Sheri Molnar
Greg Monzel
Kara Pearce
John Perkins
Dan Popiela
Michelle Priddy
Brandon Rust
Linda Schoppel
Amanda Smith
Kelly Spiegel
Mark Zelonis

EAST CENTRAL

Julia Mast
Judith Nastally
Andrea Rae Williams
Kathy McDonald & Ned
Keller (Ohio)

SOUTH CENTRAL

Christine Carver
Barbara Charon
Ralph & Barbara Cooley
Bill & Sue Linder
Joe L. Phillips
Pam Robertson-Bolton
Deanna Taylor
Laura W. Young

WEST CENTRAL

Joe Eberts
Gregory Shaner

To join INPAWS or renew your membership, visit www.inpaws.org.

INPAWS AND ITS CONSERVATION PARTNERS INVITE YOU TO...

The 5th Annual CONSERVATION DAY at the Indiana Statehouse

Tuesday, January 27, 2009
8:30 AM – 1:30 PM

*Sponsored by Indiana Conservation Alliance (INCA),
a statewide network of over 30 nonprofit organizations
providing a unified voice for the protection and wise use
of natural resources to enhance our quality of life.*

Indiana's 2009 State Legislative Session is just around the corner. This will be a budget-making session and INCA needs your help to focus our legislators' attention on conservation!

The Alliance has chosen three top priorities for this year:

- \$4 million for land protection through the Indiana Heritage Trust
- \$2 million for soil and water conservation programs
- Passage of a Renewable Electricity Standard which increases our use of wind, solar, and other types of renewable energy

Conservation Day is a ready opportunity to show our elected officials that Hoosiers care about protecting our precious natural resources and preserving our environment. It's your chance to engage legislators in the matters that mean most to us, but it's more. You'll also meet and network with like-minded people in conservation organizations throughout the state.

The more people who come to Conservation Day, the bigger the impact. Carpool with co-workers, friends, and family or take a brisk walk to the statehouse, and help make a difference!

Thanks to sponsor donations, registration for Conservation Day is FREE. You may register the day of the event, but please preregister by January 16 at www.nature.org/indiana or 317-951-8818 to enable INCA to plan food for the number of attendees.

Morning Information Session

Indiana Government Center South (Room B)

8:30–9:00 a.m.: Registration

9:00–11:00 a.m.: 2009 Conservation Priorities

- Introduction by INCA
- Background and discussion of specific priorities

Reception for Indiana Legislators

North Atrium, Indiana Statehouse

11:30 a.m.–1:30 p.m.: INCA Partner Displays and Lunch

- Presentations and award for Conservation Legislator of the Year
- Light refreshments for registrants, legislators, and their staff

Location: 200 West Washington Street, Indianapolis, IN 46202. Park at White River/State Museum State Park or Circle Center Mall.

Red Mulberry

(*Morus rubra* L.)—The Sweetest Native Tree Fruit in Indiana

If you have never eaten a luscious, juicy, tree-ripened red mulberry plucked directly from the twig, you have missed one of Indiana's special forest treats.

After all, some three dozen wild bird species that throng to wild mulberry trees to harvest the succulent berries could not be wrong! Besides, fox and gray squirrels, chipmunks, white-footed mice, skunks, opossums, and raccoons also seek out mulberry trees in June for tasty tidbits. Wildlife is seldom in error about what is good, and also what is good for them.

Decades ago, my friends and siblings and I often spent lazy summer hours perched precariously on the arching limbs of ancient mulberry trees, nibbling the sweet ripening berries, meanwhile purpling our faces, lips, and tongues with the sticky mulberry juice. As great as mulberries are when eaten fresh, if baked into hot, steaming pies, you have a dessert that has no equal! And when made into sweet jam or jelly, or fermented into robust wines, the mulberry taste is just as wonderful. They also freeze nicely for winter treats.

Large forest-grown trees with spreading canopies that graced the original Indiana forest are a rarity today. Such trees produced literally gallons of fruit in good years. Years past, I once counted six fox squirrels busily harvesting mulberries at the same time in such a tree that must have been 30 inches in diameter and 60 or more feet tall. Now red mulberry much more commonly occurs as a small- to medium-sized tree in fence rows, along woods borders, or in successional old fields, where it has been planted by the birds or mammals that deposited its seeds there. It also occurs commonly in towns and cities where mowing is absent.

For many years, a huge mulberry grew at the west wall of Stalker Hall on Indiana State University's campus. It was a magnificent specimen, 26-28 inches dbh or larger, with perhaps 20 or more feet of clear bole. I admired this impressive tree every time I walked across campus, and enjoyed the hordes of birds who feasted on its fruity bounty in summer.

Then one morning 20 or so years ago as I walked to my office, I was aghast. The veteran mulberry had been felled by the campus grounds staff, and dismembered into short blocks for hauling to the landfill! I was literally sick to my stomach at the loss of the magnificent tree. Had I known in advance, at least we could have salvaged the 500 or so board feet of lovely lumber the trunk

would have provided. But then, once a year the great tree's dropped mulberries purpled the sidewalk, so apparently someone decreed the monarch had to go. I was so upset that I wrote a scathing missive to those responsible, calling for Stalker Hall to be re-named Starker Hall, since the missing tree left such a gaping void.

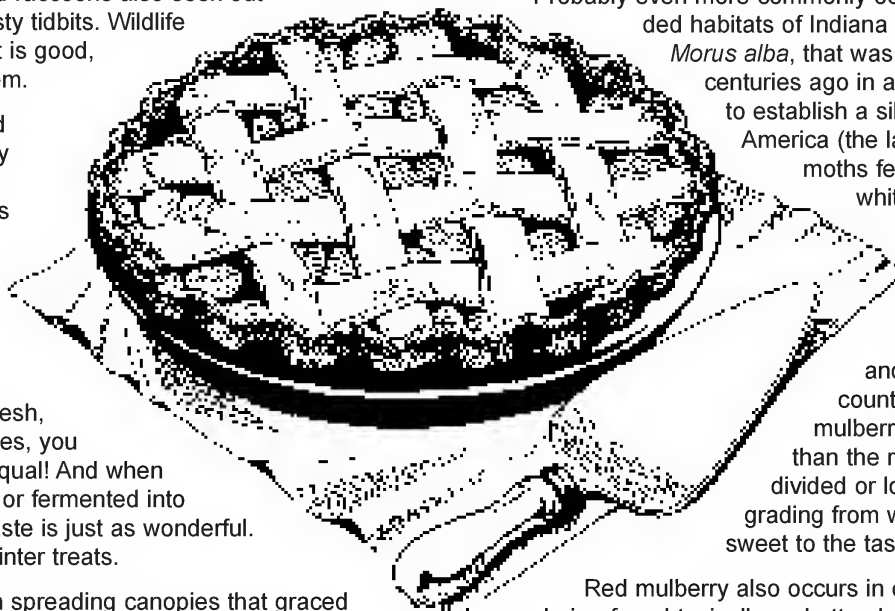
Probably even more commonly occurring in the unintended habitats of Indiana is the white mulberry, *Morus alba*, that was introduced from Asia centuries ago in an ill-fated attempt to establish a silk industry in North America (the larvae of silkworm moths feed on the leaves of white mulberry). Although the silk industry was a failure here, the white mulberry escaped from cultivation early on and now occurs in every county in Indiana. White mulberry typically is shrubbier than the red, has leaves more divided or lobed, and has fruit grading from white to pink, equally sweet to the taste.

Red mulberry also occurs in every Indiana county, being found typically on bottomland sites, along moist slopes, and in mesic woods. It is much less common in oak-hickory stands, or on other dry upland sites.

Mulberry trees are quite easily identified in summer by the heart-shaped, mitten-shaped, or doubly lobed leaves with toothed margins and leaf stems of moderate (1½ to 2½ inch) length. The dark brown bark occurs in long scaly plates, sometimes tinged with red. The flowers are unisexual on separate trees, with only the female trees obviously bearing fruit. (One of our irascible neighbor Lewie Laswell's favorite expressions, when I was a youngster, was describing something of little value as "worthless as a 'boar' mulberry"!)

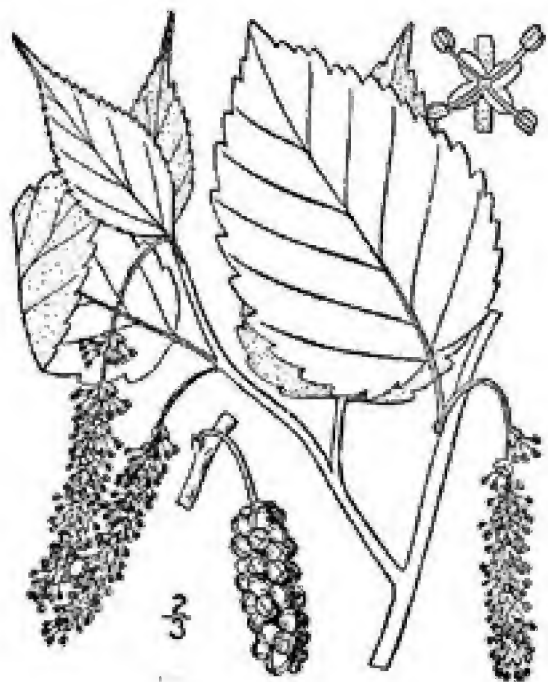
Several flowers fuse during development, hence a multiple flower, which, of course, develops into the multiple fruit that ripens into a mulberry. When you eat a mulberry, you are actually eating several tiny fruits simultaneously. Mulberry is in the same family as the Osage-orange, whose multiple fruit is the bright green softball-sized "hedge-apple."

Other distinctive identifying characteristics of the mulberry are milky sap, which oozes forth when you break a twig, and its bright yellow roots when freshly exposed from the surrounding soil. The wood is about the same density as white oak (45 pounds/cu. ft.),



is yellow when newly sawn, then turning a warm brown as it seasons. The close-grained wood is tough but easily worked. If available in usable sizes, it should be used more often in wood working as its firm, even grain takes a nice finish. It is amazingly durable in contact with the soil or the weather, hence once was a favorite among farmers for fence posts and was popular for building small boats. Another early use was by coopers for making wooden kegs and small barrels for food storage. I read one account that it was favored by pioneer farmers for making moldboards for their breaking plows, before cast iron or chilled steel plows came into use.

Early Native Americans wetted the bark of mulberry to separate the long fibers, then twisted or braided these into ropes of considerable strength. Donald Culross Peattie, that most-knowlegeable naturalist, gave accounts of the women of the Choctaw Tribe of the southern U.S. fashioning cloaks or gowns of sections of mulberry bark sewn together with mulberry fibers. And a most interesting use of the tree was that, about 560 B.C., Nebuchadnezzar, the Babylonian King, apparently chose to be buried in a mulberry coffin, presumably because of its durability in the soil. (The black mulberry is native of Persia and other Mid-East countries.)



Red mulberry *Morus rubra*. USDA-NRCS PLANTS Database / Britton, N.L., and A. Brown. 1913. An illustrated flora of the northern United States, Canada and the British Possessions. Vol. 1: 631.

INPAWS Supports Indiana Documentary Series

INPAWS is a funder of "The Natural Heritage of Indiana," a documentary produced locally by WFYI, the Indianapolis Public Television station.

\$5000 raised primarily from our plant sales was granted by the board to the project in 2006 in support of our mission of educating the public. We received credit as a funder, with our logo featured at the beginning of the programs, along with a voice-over of our mission statement, and several additional promotional spots highlighting our organization.

The series is the brainchild of producer/videographer Sam Orr, who came to Indiana to pursue a master's degree in botany/ecology with Keith Clay at University of Indianapolis. It was inspired by the coffee table style book by the same name, edited by long-time INPAWS member and frequent Journal contributor Marion Jackson. Indiana University Press has recently reissued the book. It is full of wonderful photographs with chapters contributed by many biologists and geologists across the state.

The television series has four episodes, all shot in state-of-the-art high definition. The first, "The Indiana That Was," covers ancient geologic history up to about 250 years ago. The second two cover "Life in the Water" and "Life on Land" at the present time. The fourth episode looks at conservation efforts that will help shape the future of Indiana. There are many striking images of plants, including some stunning time-lapse photography, especially in the "Life on Land" segment.

The first episode, the only one yet televised when nominations were announced, won regional Emmys in the categories of Best Science Program or Special and for videography. The series has been shown on PBS affiliate chapters throughout the state.

INPAWS members Rebecca Dolan and Mike Homoya served on an advisory committee along with Marion Jackson and had the opportunity to suggest material for filming and editorial changes to the scripts. INPAWS members were invited to two advance screenings of episodes and offered the opportunity to suggest improvements.

The series will repeat periodically on television and will have a life beyond its broadcasts. WFYI has partnered with the Indiana Historical Bureau to develop a website (naturalheritageofindiana.org) with extra content and outreach materials. INPAWS is acknowledged as a funder and there are links to our website on the home page. The Bureau received a grant from the Nina Mason Pulliam Trust to provide DVDs of the series to K-12 schools throughout the state. Some of the extra materials on the website link specifically to state educational standards and provide lesson plans to help teachers make the most of the series. A teacher workshop and interdisciplinary statewide conference on Indiana natural history focusing on changes in place over time are planned for the spring of 2009.

If you are interested in these conferences or other potential spin-off projects from the series, you can sign up for an e-newsletter through the website. Also, be sure to keep an eye out for rebroadcasts of the series in your area.

Hoosier Outdoor Expo

Tom Hohman, Chair, Hoosier Outdoor Expo Committee

The disconnect between today's children and nature has received a lot of attention lately. Many INPAWS members have read Richard Louv's book, *Last Child in the Woods*, and noticed the awareness that the book has drawn to this issue. A dilemma has been, once we accept the facts behind so-called nature deficit disorder, what can we do to remedy it?

The Indiana Department of Natural Resources (IDNR) hopes it has found a partial answer. The first annual Hoosier Outdoor Expo will be held September 25-27, 2009, at Fort Harrison State Park in Indianapolis. Modeled on similar expos in other states, the three-day event is expected to draw more than 10,000 attendees, with a focus on attracting families and minorities with little outdoor experience. The purpose is to introduce them to natural resource related activities, and present real opportunities to learn and become involved with them.

A Collaboration

The size and scope of the Hoosier Outdoor Expo are initially overwhelming. The only way IDNR can manage an event of this size is with the help of volunteer organizations from all over the state—organizations like INPAWS. The plan is for a very interactive event, with booths from a wide range of organizations. Activities will range from traditional ones like camping and fishing to more modern ones like mountain biking.

At the first organizational meeting that INPAWS attended, we were seated between representatives of a hunting dog organization and an off-road vehicle group. That may seem like an odd grouping, but we actually have much in common, starting with a love of the outdoors. The ability to bring together groups of such divergent backgrounds will be one of the strengths of this event.

Focus on Kids and Families

The event will run Friday through Sunday. Friday will be a kids-only day, with third-grade schoolchildren specifically targeted. IDNR naturalists from all over the state will converge on Fort Harrison to offer programs aimed at that age group. Invitations have been sent to schools to arrange for field trips, and 1,000 third-graders are expected to take part.

Saturday and Sunday will be open to the general public. This is where organizations like ours will have booths offering hands-on activities. Although preparation for the INPAWS booth is still in the early stages, we are planning displays emphasizing the inter-relationship between native plants and butterflies. We hope to have samples of native plants that are hosts to butterflies, and larvae of the butterflies. We also plan demonstrations of monarch butterfly tagging, highlighting the story of the annual migration to Mexico. INPAWS is developing partnerships with other organizations that might emphasize similar topics at the Expo.

Volunteer Opportunities

All of this will require INPAWS volunteers to help organize the event and staff the booth. Also, if there is enough interest, we would like to offer our members as assistants to the IDNR natu-

ralists during the special events on Friday. As anyone who has been on a naturalist-led hike with kids can attest, it's sometimes difficult for kids in the back to maintain the type of interaction with the hike leader in the front that you would like. That's where INPAWS volunteers could make a big contribution. If INPAWS could provide one assistant for each naturalist, it would be a great help and would make the event more meaningful to the kids.

We will share more information on the Outdoor Expo as we get closer to the date. If you like the concept of this event, I invite you to contact me now to help organize the contribution of INPAWS. It will be an opportunity to be part of a unique first-time event. Also, we really would like an idea how many members might be willing to help the IDNR naturalists on the Friday kids day. We need to determine if there will be enough interest among members for us to offer that help; this is to express an initial interest only, not a final commitment. If you have an interest, please let me know at hohmantr@aol.com or 317-831-1715.

By day, Tom Hohman works for IDNR. Nights and weekends, he is the tireless leader of INPAWS' Central Chapter, writes for INPAWS Journal, encourages the formation of new chapters, and is a veteran Plant Sale chair. We wonder when Tom finds time to sleep!



This youngster participated in a garlic pull at Skiles Test Park, Indianapolis, transportation courtesy of the Letha Queisser Memorial Fund, newly renamed Letha's Youth Outdoors Fund. Photo by Ruth Ann Ingraham.

TAKE A [MINI]-HIKE!

Ritchey Woods Nature Preserve

Cheryl Shearer, Veteran Hiker

When I was an Indianapolis city dweller, I often heard about Ritchey Woods. It was “up north,” in Hamilton County, where Brownies and Cub Scouts trekked and where The Children’s Museum conducted classes. I was told it was difficult to access because there was no signage. I never had a need to visit until I became a suburbanite, taking up residence less than a mile from the site. Now, rarely a month goes by when I am not an awed visitor to the 127 acres of prairie, restored wetlands, and native woodlands—all of this within walking distance of Sam’s Club!

Five trails meander through the preserve, totalling about 2 miles. They pass through deep woods (second-growth forest dating from the 1940s) and over boardwalks that traverse wetlands that are being restored. Creek Ridge Trail takes you alongside Cheeney Creek, where early last spring skunk cabbages blossomed. Later in spring, you will be treated to an abundance of wildflowers: hepatica, bloodroot, spring beauties, dutchman’s breeches, trout lilies, may apples, and fire pink. The floral treat continues in the prairie throughout the summer.

The Beech Hollow trail loop produced an abundance of puffballs in early fall. A hike on October 22 took visitors past 20 giant puffballs growing in a circle. This vital component to the ecosystem starts as a fragrant white ball, then becomes dull and eventually bursts to distribute its spores before it dries up, having served its role of enriching the nutrient base for the forest flora.

A small stream, Hare Creek, is returning to its earlier existence thanks to the removal of drainage tiles. Sycamore and cottonwood are once again growing in the area. Last year a prairie burn was conducted to eliminate invasive species (“bamboo” was rampant), enrich the soil, and speed prairie plant germination. Volunteers have attacked garlic mustard since 2005, with noticeable results.

The site has changed hands several times; willed by Dr. James O. Ritchey to The Nature Conservancy, ownership passed successively to The Children’s Museum and to the Town of Fishers,



which intends to maintain and manage the natural habitat and eventually develop a nature center. Because 42 acres are an Indiana State Designated Nature Preserve and the remaining 85 acres are under a conservation easement governed by the Indiana Department of Natural Resources, there is assurance of no further development.

Chief Naturalist Danesa Stolz says Ritchey Woods is home to a wide variety of animals: deer, gray and red fox, muskrat, mink, beaver, bats, and 150 species of birds along with salamanders, frogs, snakes, and toads. A Henslow sparrow was recently spotted.

Directions: Located one-half mile south of 106th Street, Ritchey Woods is accessed through the Town of Fishers’ Multi-Use Trail System’s Hague Road connector. A gravel path leads to a large parking lot with composting toilets and bike racks and a nearby shelter.

We welcome new member Cheryl Shearer to INPAWS. Recently retired from a career in social service, Cheryl has hiked on the Appalachian Trail and to the bottom of the Grand Canyon—twice!

Giant puffball (*Langermannia gigantea*). Photo by Kathy Pellman.

Recent Donations to Letha’s Youth Outdoors Fund

William & Lynn Boatmen

Kristen Q. Cohee

Jack & Nancy Douglas

Tom Hohman

David R. & Carolyn R. Queisser

Pat Sieloff

L. Louise Tetrick

Jane & Bob Tharp

Trailing Arbutus Garden Club

A new brochure, “Get Into Nature” is available to promote Letha’s Youth Outdoors Fund with schools, church youth groups, and scouting organizations. Please help us get the word out. Contact Youth Outreach Committee Chair Donovan Miller for copies of the brochure, or download it from www.inpaws.org.

A Botanical Eden

Jasper-Pulaski Fish & Wildlife Area

Jim McCormac, Ohio Division of Wildlife

Avid birder/botanist Jim McCormac writes an engaging nature blog replete with his full-color photos. This article about "one of the coolest botanical forays that I've had in many moons" is abbreviated from his posting of September 7, 2008, the day after INPAWS' hike to Tefft Savanna in the same area. For the full story, visit <http://jimmccormac.blogspot.com> —Ed.

My most recent safari was to Jasper-Pulaski Fish & Wildlife Area in northwestern Indiana. For all you non-Hoosiers, it's Pull-ask-eye! Not Pull-ask-ee! Practioners of the local dialect are firm on this point. At least we got the Jass-per right. This place is legendary for the masses of migrant sandhill cranes that collect late each fall, creating a spectacle that is one of the midwest's must-see avian events. I finally made the pilgrimage last year and, like the others, was dumbstruck by the sight and sounds of thousands of cranes. But I was also intrigued by the scrappy shards of dead botanical matter that were evidence of an outstanding prairie ecosystem.

Wanting to come back during the growing season and see the sights, I contacted Indiana botanist extraordinaire Mike Homoya and made arrangements for this visit. To accompany us, he assembled some of the very best field botanists and ecologists in the Great Lakes region. Their involvement made for a heck of a trip, and I saw many "life" plants, some of them the rarest of the rare in the lower Great Lakes.

Jasper-Pulaski is an incredible place of global significance. Within its 8,000 acres are outstanding examples of dry sand prairie, and prairie wetlands filled with regionally mega-rare coastal plain

disjunct plants. Like so many of our greatest protected natural resources, J-P was purchased with money from hunters and anglers, a fact that should be recognized by users of these sites no matter what their interest in visiting. The time has long since come when we need to draw more people that are interested in the environment into helping to pay for its protection. But that's a subject for some other time...

Good thing I had the hip waders along, because I spent a good chunk of Friday over my knees in water in J-P's wetlands, discovering one rare plant after another.

I knew it was a good omen when one of the first plants I spotted as our trip began was a smartweed. Sure, you may not get overly excited about a smartweed, but I sure did with this one. It is Carey's smartweed, *Persicaria careyi*, and this is NOT the similar, weedy dock-leaved smartweed, *Persicaria lapathifolia*, that one sees everywhere. This plant hasn't been seen in Ohio since Edwin Moseley collected a specimen in 1920 in Erie County. It was a lifer for me, and for the much-traveled Daniel Boone.



Back row (L-R): Tom Post, Mike Homoya, Daniel Boone, Roger Hedge, Janet Creamer. Front row: Jim McCormac, Lee Casebere, Ben Eddy. Photo by John Ervin.



Floating bladderwort, *Utricularia radiata* (above): This aquatic oddity was high on our target list, and we found a number. Bladderworts are the largest group of carnivorous plants with about 250 species worldwide, and all of them are interesting. This one is fascinating. It is free-floating, with roots that are inflated like pontoons. Thus, it is quite bouyant. The tiny bladders are borne on rootlets at the tip of the primary root branches, and it is within these little sacs where death occurs. Small organisms are attracted to the bladders by chemicals secreted by the plant, and touch guard hairs that operate the bladder. The sensitive hairs trigger the bladder door, just like a mouse trap, and it opens inward with such force that the prey is sucked in. The door snaps shut and the bladderwort has a meal.

Floating bladderwort is one of the very rare disjuncts that Jasper-Pulaski is noted for. It is primarily coastal plain in distribution, with rare and local isolated populations in northwest Indiana and only two counties in southwest Michigan. If you don't come here, you are in for a long drive to see this species along the coast.



A true showy jewel of the J-P wetlands is meadow-beauty, *Rhexia virginica*. It is quite common here although quite the rarity in Ohio. The calyces, sans the other flower parts, look just like tiny water pitchers (lower left of the photo). The family Melastomataceae, to which this species belongs, becomes far more prolific in tropical regions.

Another exciting mega-rarity was creeping St. Johnswort, *Hypericum adpressum*. This is another that doesn't occur in Ohio and has a sparse midwestern distribution.

"Not just any old wetland" was my thought when I encountered one dominated by two plants also extremely rare south of the Great Lakes. A big sedge with brown spikes was horned beaksedge, *Rhynchospora macrostachya*, another of the coastal plain refugees. It is not often seen in the midwest, but quite common in J-P wetlands. Accompanying it was a grassy-looking sedge, often forming floating mats—another great rarity, Robbins's spikerush, *Eleocharis robbinsii*.



These two species may be rare, but they are far more than mere curiosities. While traipsing through these wetlands, I noticed a number of animals using the beaksedge for shelter. The most interesting was a small jumping spider that constructed web nests within the bristly spikelets. I have no idea what species it is. One tenet of ecology is that rare plants often beget rare animals: find the former, and you've a good chance of discovering the latter.

My thanks to the Indiana Division of Fish & Wildlife for partnering with the Indiana Division of Nature Preserves and the Indiana chapter of The Nature Conservancy to ensure that Jasper-Pulaski's incredible diversity remains intact.

Species Spotted on Tefft Savanna Hike

We thank Richard Scott for sharing these notes from the INPAWS hike on September 6, 2008, led by Mike Homoya and Tom Post.

Low Dune in Barren Oak Savanna starting s. of CR1000N about 0.2 miles e. of CRN400E

<i>Andropogon gerardii</i>	Big bluestem
<i>Asclepias syriaca</i>	Common milkweed
<i>Aureolaria pedicularia</i>	Fernleaf yellow false foxglove
<i>Chamaecrista fasciculata</i>	Partridge pea
<i>Coreopsis palmata</i>	Prairie coreopsis
<i>Coreopsis tripteris</i>	Tall coreopsis
<i>Desmodium sessilifolium</i>	Sessileleaf ticktrefoil
<i>Echinochloa crus-galli</i>	Barnyardgrass
<i>Euphorbia corollata</i>	Flowering Spurge
<i>Euthamia gymnospermoides</i>	Grass-leaved goldenrod
<i>Froelichia floridana</i>	Cotton-weed
<i>Helianthus divaricatus</i>	Woodland sunflower
<i>Helianthus occidentalis</i>	Western sunflower
<i>Ionactis linariifolius</i>	Stiff aster
<i>Lespedeza capitata</i>	Roundhead lespedeza
<i>Lespedeza hirta</i>	Hairy lespedeza
<i>Liatris aspera</i>	Rough blazing-star
<i>Ludwigia alternifolia</i>	Seedbox
<i>Monarda punctata</i>	Spotted beebalm
<i>Plantago lanceolata</i>	Narrowleaf plantain
<i>Polygala sanguinea</i>	Blood milkwort
<i>Polygonum pennsylvanicum</i>	Pennsylvania smartweed
<i>Polygonum punctatum</i>	Dotted smartweed
<i>Pteridium aquilinum</i>	Brackenfern
<i>Quercus velutina</i>	Black oak
<i>Rosa carolina</i>	Carolina rose
<i>Rhus copallinum</i>	Winged sumac
<i>Rotala ramosior</i>	Tooth-cup
<i>Solidago nemoralis</i>	Old-field goldenrod
<i>Solidago rugosa</i>	Rough goldenrod
<i>Solidago speciosa</i>	Showy goldenrod
<i>Symphytotrichum oolentangiense</i>	Skyblue aster
<i>Tephrosia virginiana</i>	Virginia tephrosia
<i>Vaccinium pallidum</i>	Dry-land blueberry

Marsh Area along CR1000N about 0.15 miles e. of CRN400E

<i>Brasenia schreberi</i>	Watershield
<i>Calamagrostis canadensis</i>	Blue-joint grass
<i>Dulichium arundinaceum</i>	Threeway sedge
<i>Eleocharis robbinsii</i>	Robbins' spikerush
<i>Hypericum adpressum</i>	Creeping St. Johnswort
<i>Lycopus amplexans</i>	Clasping water horehound
<i>Nyssa sylvatica</i>	Blackgum
<i>Polygonum amphibium</i>	Water smartweed
<i>Quercus palustris</i>	Pin oak
<i>Rhexia virginica</i>	Meadow-beauty
<i>Rhynchospora macrostachya</i>	Tall beak rush
<i>Sagittaria graminea</i>	Grassy arrowhead
<i>Spiraea tomentosa</i>	Steeplebush

Nine Hundred Miles from Home, Part 2

Please not to eat sea rocket (*Cakile edulenta*): variety *lacustris* is watch listed. Instead, enjoy some of Indiana's carnivorous coastal plain disjuncts (CPs).

Some of these frequent Indiana Dunes National Lakeshore pannes, critically imperiled alkaline foredune ponds. Though most pannes are inaccessible, between early June and mid-October you may view a carpet or two of stiff-stemmed, orchid-like, butter yellow horned bladderwort (*Utricularia cornuta*), state threatened, in the fenced-off pannes down-slope from the road to the Lake at West Beach. Occasionally, the Shirley Heinze Land Trust has permission to take a few hikers to view horned bladderwort close-up.



Horned bladderwort (*Utricularia cornuta*). USDA-NRCS PLANTS Database / Britton, N.L., and A. Brown. 1913. An illustrated flora of the northern United States, Canada and the British Possessions. Vol. 3: 232.

We always look for the naked seeds of low nut rush (*Scleria verticillata*), not a CP, and one-third inch toad bugs, insects that look like and hop like toads. They're the associates of hair bladderwort (*U. subulata*), state threatened. We have to hunker down: hair bladderwort may grow no taller than the capital N of the title of this article. Zig-zag stems support white wisps of partially exposed petals of cleistogamous (self-pollinating) flowers. Ken Klick, their contemporary discoverer, thought the plants were a peculiar kind of moss. On the coast, find fully opened, yellow chasmogamous (insect-pollinated) flowers. Both horned and hair bladderworts trap insects with subterranean bladders. Hair bladderwort has been found in sphagnum with round-leaved sundew (*Drosera rotundifolia*), watch list. Lucky (or patient) observers may see a leaf actually entrapping a fly.

The Lakeshore's Pinhook Bog (guided tours only: 219-926-7561) features both round-leaved and narrow-leaved sundew (*D. intermedia*), state rare, forming easily seen reddish patches of less than dime-sized leaves fringed with sparkling globes of insect-enticing sugar dew. In the eye of the bog, you'll see what looks like common bladderwort (*U. vulgaris*), not a CP.

The guide probably won't fish out any plants, but they're really bog bladderwort (*U. geminiscapa*), state endangered. This floating, rootless carnivore catches its prey in tiny bladders hidden amongst dissected leaves. Bog bladderwort boasts both insect-pollinated, aerial yellow flowers and cleistogamous submersed white, unopened blossoms. Because of the aerial flowers' resemblance to common bladderwort, this plant awaited its Indiana discovery until 1988. Visiting botanist A.A. Reznicek from the University of Michigan had the fresh eye to see what dozens of Chicago Region botanists overlooked.

To be continued...

Some Books

Schnell, D.E. *Carnivorous Plants of the United States and Canada*. Second edition. Timber Press, 2002. (Helpful identifications and cultivation advice.)

Swink, F.S. and G.S. Wilhelm. *Plants of the Chicago Region*. Fourth edition. Indiana Academy of Science, 1994.

Yatskievych, K. *Field Guide to Indiana Wildflowers*. Indiana University Press, 2000.

Looking for a Home?

A home in INPAWS, that is? We browbeat you regularly about volunteering your time to sustain this organization, but maybe you're not sure where you fit in. Here's an idea to bridge the gap.

E-mail or send us a few notes about yourself, what you like to do, what interests you about native plants, what you're good at, how you like to spend your time—anything to help us get to know you better. We'll find a place for you on an INPAWS committee where you can learn the ropes and enjoy the company of others with your interests.

Volunteering with INPAWS is fun and you'll meet neat people. Let us help you find a home with us. E-mail us at membership@inpaws.org or write to PO Box 30317, Indianapolis, IN 46230-0317.

Surfing for Plant IDs

Rebecca Dolan, PhD, Friesner Herbarium, Butler University



Websites with good photos can often be helpful with plant identification, especially to confirm a suspected identification or quickly eliminate a way-off incorrect one. An important caveat is that many things on the Internet are misidentified. Always double-check with other references. Here are a few recommend sites. The links all begin with "http://" but not all require the "www."

plants.usda.gov

The USDA Plants website has lots of good information and is very easy to use. You can search on common or scientific names. Pages for each plant have distribution maps for the U.S. and Canada (so you can quickly see if a plant is known to grow in Indiana) and usually several photos and line drawings. Other useful information includes whether the species is native or not, synonyms (other names under which the plant has been known), plant family, life form (tree, shrub, etc.), duration (annual, perennial, etc.), and whether the plant is listed as rare or endangered or, conversely, is considered invasive anywhere in its range. For some plants, photographs of the seeds are provided. The site is fairly frequently updated. A shortcoming is that many of the common names listed are unusual and certainly not in common use in Indiana.

www.tropicos.org

Tropicos is maintained by the Missouri Botanical Garden and is arguably *the* on-line source authority for currently accepted scientific names. Formal plant names are constantly in flux as botanists rethink the range of variation that can be considered to constitute a single species, and as historical treatments are reconsidered and reapplied. Work on the on-going *Flora of North America* multi-volume series has led to a lot of recent changes. The Tropicos site can be searched by common and scientific name, cites literature for taxonomic treatments, lists synonyms, and has images of living plants—and sometimes herbarium sheets—for each taxon. Spoiler alert: many name changes have come through in the last few years, including changes in genus for most species formerly classified as *Asters* in Indiana. Some of your favorite, familiar scientific names may be history.

www.missouriplants.com

The Missouri Plants site is especially excellent because of its photographs. Many Indiana plants grow in Missouri also. This site has a brief key you can click on based on flower color and leaf

arrangement. You can scan through images to find the plant you are looking for. The individual plant pages have descriptions and details illustrated by beautiful close-up photos of plant parts like leaves and stems, often showing the range of variation that can be found within an individual species.

www.ct-botanical-society.org/index.html

The Connecticut Botanical Society website has good photographs and also information about plants. You can search by flower color.

www.mobot.org/gardeninghelp/plantfinder/alpha.asp

The Kemper Garden Center at the Missouri Botanical Garden has pictures, plant information, and sources for many natives that are in the horticultural trade. You can search by scientific or common name. Through their PlantFinder Search you can also search by preferred habitat, growth form, use (water plant, attracts butterflies, dried flowers, etc.), and other characteristics, like good fall color.

www.google.com

If you go to the Google site, you can select to search through images instead of through the web, which is mostly text-based material. Searching in Google images on a plant name usually yields many photographs and drawings. These can of course be posted by anyone, so there are often errors. It helps to search on the scientific name, but even then you can't be sure of the id, although looking through a page or two of images will give you the sense of "majority rules" on what is likely the correct plant. Click on the image to go to the original website to judge for yourself how authoritative a source it seems.

Kay Yatskievych offers the tip that she scans the Google images for those on sites that end in ".edu" and are therefore affiliated with academic institutions. They tend to be more reliable, but there are no guarantees.

Mary Welch-Keesey, Purdue University Consumer Horticulture Specialist working out of White River Gardens, finds www.cas.vanderbilt.edu/bioimages/frame.htm and www.hort.uconn.edu/Plants/ to be helpful for the identification of woody plants.

Graphic courtesy of www.hotpeachpages.net.

Coming Up

Saturday, January 17 **Central Chapter Icebreaker**

Thursday-Friday, January 22-23 **Great Lakes Urban Habitat Restoration Symposium, Chicago**

Tuesday, January 27 **Conservation Day at the Indiana Statehouse**

Saturday, April 25 **INPAWS Hike in Allee Woods** (Parke County), led by Dr. Amanda Ingram, Wabash College

Watch for announcements of INPAWS events and field trips in the mail, via e-mail, and at www.inpaws.org.

Central Chapter News

Tom Hohman, President

INPAWS Central Chapter members are invited to the first annual "Icebreaker" get-together on Saturday, January 17, from 2:00 to 5:00 p.m. Shake off the winter blahs and enjoy refreshments and conversation with other INPAWS members. Look for details on the postcard reminder that you will receive in early January.

New Central Chapter officers Tom Hohman, president, George Peregrin, vice president, and Mark Outcalt, secretary/treasurer, have nearly completed plans for 2009 field trips and presentations. A presentation on green roofs is planned in March, plus field trips to Clegg Botanical Garden on May 2 and a Hamilton County Urban Conservation Association native habitat project in June. A native plant garden tour is planned for July. More information on these later events will be in future issues of INPAWS Journal and in postcard reminders.

We also plan at least two invasive control events. We are talking with Central Indiana Land Trust about an invasives control day at the Gene B. Glick Nature Preserve on the northwest side of Indianapolis, and are hoping to schedule another one at a local park. The Glick Nature Preserve is small, only 9 acres, but it represents a rare oasis of nature in an urban setting and is being overrun by invasives, especially bush honeysuckle.

A number of good ideas for future hikes and presentations were received in response to an e-mail request from the officers. Many of those are still being considered for next year, but new ideas are always needed. Please contact any of the officers with your ideas.

Still Basking in the Glow

The 15th Annual INPAWS Conference "Growing Native Plants for Wildlife" was a success on many levels: largest number of attendees, largest number of out-of-state attendees (big Ohio contingent), largest number of non-member attendees, extremely high attendee evaluations for nearly all aspects of the conference, nationally known speakers stressing each individual's importance in restoring our environment, and a great venue with delicious food!

Thank you to all those who attended for your patience and goodwill in the face of slight overcrowding (and heat!) due to the record attendance.

The extraordinary volunteers who pulled this event together were:

Dan and Sophia Anderson: Planning, Education, Non-Profit Displays
Janet Creamer: Book Sale
Lynn Dennis: Book Sale
Wendy Ford: Publicity, Presentation Design, Brochures, Program
Gillian Harris: Speaker Gift Artwork
Karen Hartlep: Conference Coordinator
Kathleen Hartman: Treasurer
Nancy Hill: Speaker Hospitality, Speaker Dinner Host, Logistics, Planning
Tom Hohman: Floater Extraordinaire
Fritz Nerding: Audio/Visual Technician

Dee Ann Peine: Registration, Attendee Packets
Rich Peine: Attendee Packets
Chris Plews: Sponsors
Mark Outcalt: Registration Chair, Attendee Packets, Logistics, Mailings
Betsy Wills: Book Sale
George Wilson: Registration
Betsy Wilson: Registration, Hike Leader
Reni Winter: Speaker Hospitality, Planning, Publicity

Thank you to those who made the day truly worthwhile—the thought-provoking, talented, and engaging speakers: Hilary Cox, Mike Homoya, Jim McCormac, Doug Tallamy, Reni Winter, Steve Yaninek, Wendell Zetterberg, Jr., and Dean Zimmerman.

Thank you also to our generous sponsors whose support made this event possible.

Blazing Star Sponsor: Plews Shadley Racher & Braun, LLP

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Trillium Sponsors: Indiana Living Green, Indiana Wildlife Federation, Wild Birds Unlimited Nature Shop, Winterhaven Wildflowers & Native Plant Preserve

Symposium: Great Lakes Urban Habitat Restoration

The Chicago Park District, in cooperation with several agencies involved in Great Lakes restoration, has announced a major symposium aimed specifically at habitat restoration in the urban nearshore and riverine areas, which are heavily stressed by increasing populations, heavy industry, commercial navigation, and pollution.

Scientists, planners, policymakers, and other experts will gather to: review methods for urban habitat restoration and share techniques and technologies; exchange progress on similar efforts; network with other professionals involved in restoration; discuss ways to make restoration projects more cost effective; and develop methods to communicate the benefits of urban nearshore restoration to the public, decision-makers, and the scientific community.

The day-and-a-half symposium will be held January 22-23 at the Palmer House Hilton in Chicago. The registration fee is \$100 (scholarships available). Register online at <http://www.glf.org/urbanrestore/overview.html> or by contacting Martha Borie-Wood at 312-939-0838 x227 or mboriewood@greatlakes.org.

Neighborhood Hosts Rain Barrel Project

Thirty neighbors from the central Indianapolis' Mapleton-Fall Creek area gathered at Broadway United Methodist Church last November to learn how to make rain barrels. Topics included backyard conservation, wildlife enhancement, and the basics of rain barrel construction. Funded by an Indiana Department of Environmental Management (IDEM) grant to Marion County Soil and Water Conservation District and the Lower Fall Creek Watershed Alliance, this demonstration project provided each attendee with all the materials to make their own free rain barrel.

The Lower Fall Creek Watershed Project seeks to improve water quality in the primarily urban and rapidly developing suburban landscape of the watershed. One way to keep stormwater runoff clean and avoid its becoming polluted as it runs across the landscape is to collect it as it comes off a roof.

Lawn and garden watering make up nearly 40% of household water use during the summer. Rain barrels provide an ample supply of free "soft water" to water gardens and flower pots and also to wash cars and windows. Collecting water from 20 homes in a barrel per rain event conserves 1,000 gallons of water which would otherwise

BOOK REVIEW

Bringing Nature Home: How Native Plants Sustain Wildlife in Our Gardens

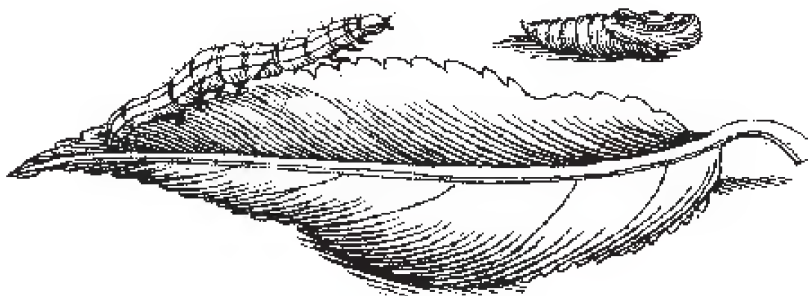
I'll admit it: for a long time I tended to dismiss the arguments of gardeners who advocate wider use of native plants. I dislike being preached at, and a lot of what I read and heard from the native plant enthusiasts struck me as distinctly preachy. My gardens had always included a few natives, but mainly because I found them pleasing from an ornamental perspective. I didn't give much thought to the wider role they might play in the local ecosystem. My garden was full of bees and butterflies and birds, so I figured everything was just fine.

Then one day a couple of years ago, I got a book proposal that shattered my complacency. It was from a professor of entomology named Doug Tallamy. In it, he explained how healthy wildlife populations are directly dependent on native plants. When those natives are overrun by invasive exotics, or edged out of gardens by non-native ornamentals, wildlife populations decline. Insects, it turns out, have very particular tastes — they won't eat just anything; they're absolutely dependent on native plants. Fewer native plants mean fewer insects, and fewer insects mean fewer birds. You can wind up with a silent spring without spraying a drop of DDT.

When Doug's book, *Bringing Nature Home*, was published, it immediately struck a chord with readers. A full-page story about the book and its message appeared in the New York Times, and the book shot up to number 30 on Amazon.com — a first for a Timber Press book. The reason isn't hard to figure out: *Bringing Nature Home* shows gardeners how they can foster biodiversity, simply by choosing to plant more natives. It's a simple but powerful message.

I urge you to read Doug's eloquent, persuasive account. This book is important. I promise that it will make you look at your garden — and think about your role as a gardener — in a new and more meaningful way.

Tom Fischer, Editor-in-Chief at Timber Press, former Editor of Horticulture magazine



run into storm sewers. Less stormwater runoff means cities need not build and maintain larger storm drain management systems, and homeowners may save on utility costs. Imagine what effect 200,000 or more homes with rain barrels could have on stormwater runoff and water consumption!

South Central News

Officers Gillian Harris, Cathy Meyer, Mary Damm, and Donna Ormiston have served in their positions for two years or longer and are ready to groom their successors. Please contact Gillian for details.

On a Mission

Wendy Ford, Editor

I thought Doug Tallamy's talk at the INPAWS Annual Conference alone was worth the price of admission. Ruth Ann Ingraham spoke for all of us when she described the talk and this conference as a pinnacle event for INPAWS, but I had my own personal peak experience related to my passion for gardening. It was hearing Doug's message of hope: We gardeners can DO SOMETHING about this!

I see the world through new eyes since that talk and the two subsequent days I spent reading Doug's book, *Bringing Nature Home* (see review on page 15). Now each time I drive into my suburban neighborhood, I see an overlay of arrows pointing to the burning bush, forsythia, lilac, yew with the captions Asian, European, European, Asian. Even in my own yard, with my interest in native plants, I see similar captions over my beloved paperbark maple, flame maple, cotoneaster, kerria, japanese lilac, fountain grass. Oh, I have a nice witchhazel, but it's a cross between two Chinese and Japanese species, and a comely dogwood, but it's from Ukraine.

This wouldn't bother me except for one realization: Every exotic I plant takes up space that could be occupied by something native that would sustain insect larvae to feed baby birds, frogs, and other creatures. This is where my sophisticated horticultural tastes have led—I'm starving the native wildlife!

Everybody needs to hear Doug Tallamy's message, that's the conclusion I have reached. So now I'm on a mission. A copy of his book is going to my state senator (says he majored in ecology) and to all the wholesale and retail nurseries with whom I do business as a garden designer. Each will be inscribed with the wish that they share the book with every gardener they know.

I'm mulling over how to persuade my neighbors to encourage insects to move into their landscapes rather than blasting them at first sight with a can of Raid—perhaps a carefully staged series of

articles in the neighborhood association newsletter? And how will I convince my 5-year-old granddaughter to appreciate our insect friends, she who has told me flatly that she wants nothing to do with any yucky insect stuff?

This new year, more than any in recent memory, finds me filled with hope. Wish me luck with my mission of change, and let me know how it goes with your legislator, nursery, neighbor, or grandchild.



Got Something to Say?

Why not say it in INPAWS Journal? This publication reaches 481 member households, 105 affiliated organizations (e.g., other native plant societies, Indiana land trusts, libraries, cooperative extension offices), and occasionally 100 Indiana legislators (through additional printing funded by The Nature Conservancy).

We welcome articles on native plants, restoration projects, conservation issues, outreach efforts, botanizing expeditions, gardening with natives—anything likely to interest Journal readers. Article development assistance and editing provided. Please contact the editor with your ideas at wwford@comcast.net or 317-334-1932.



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